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Quarterly Statistical Review

July - September 1975

Alberta
SOCIAL SERVICES
AND COMMUNITY HEALTH
Research and Planning Division

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TABLE OF CONTENTS

Page Nos.

Alberta Report from Nutrition Canada: A Summary of Findings 1

Alberta Vital Statistics 24

Highlights Articles: Public Assistance 53

Child Welfare. 59

Notifiable Diseases 64

July - September 1975

Notes:

Data used in the construction of all figures contained within the Quarterly Statistical Review are available on request from Research and Planning.

ALBERTA REPORT FROM NUTRITION CANADA
A SUMMARY OF FINDINGS*

Elva Perdue**

INTRODUCTION

Nutrition Canada, a national nutrition survey, was conducted in 1970-72, and the final report, Nutrition Canada National Survey, was released in November, 1973. The ten provincial reports, as well as the reports focussing on the Indian and Eskimo populations, were released in January 1975.

As the Alberta report is quite lengthy, only a few selected examples of the many tables have been included in this summary. The sample size in each of the ten age-sex categories for Alberta was not large enough to permit firm generalizations to the population as a whole, but the data are felt to be indicative of identifiable trends. It should also be noted that the subjects included in the elderly and pregnant groups were not selected by random sampling methods. The elderly were selected by local public health nurses and requested to attend a Nutrition Canada clinic. The data on this group therefore may be biased because they represent the healthier elderly persons in the population, and exclude data on shut-ins or institutionalized persons. Similarly, most of the pregnant women in the survey were referred by local health authorities to the Nutrition Canada clinics. As these women may not be representative of all pregnant women in Alberta, the sample may present a more favorable picture of the health of pregnant women than would a true probability sample of the population.

The information collected to assess the nutritional status of Canadians included dietary, clinical, biochemical, anthropometric, and dental measures, but the data in the Alberta report are based only

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* Nutrition Canada: The Alberta Survey Report, Ottawa: Bureau of Nutritional Sciences, Department of National Health and Welfare, 1975.

** Elva Perdue is the senior nutritionist for Local Health Services.

on dietary intakes, and clinical and biochemical findings. In the following summary, when the term "status" is used without qualification, it refers to both biochemical and dietary intake findings.

In this article, each nutrient will be described, several food sources will be given, and significant survey findings will be presented and discussed. The findings relative to intakes have been categorized into three levels as follows:[1]

Inadequate Intakes	- those below minimum requirements
Marginal Intakes	- those above minimum requirements but below adequate intakes
Adequate Intakes	- those providing a desirable measure of safety in meeting the requirements for a nutrient.

The following three risk groups have been used for the biochemical findings:

High Risk	- a high probability that a nutritional problem exists
Moderate Risk	- an average probability that a nutritional problem is present or developing
Low Risk	- a low probability that a nutritional problem exists.

OVERWEIGHT AND CALORIC INTAKE

In the Alberta report, overweight and obesity are expressed in terms of the ponderal index.[2] As the ponderal index decreases, the degree of overweight increases. A ponderal index below 12.5 denotes overweight, while one below 11.6 indicates frank obesity.[3]

From Table 1, it can be seen that 56 per cent of the women and 50 per cent of the men were overweight in the 20-39 age group, and of these about 18 per cent of the former and four per cent of the latter were defined as obese. In the 40-64 age group, 48 per cent of the women and 72 per cent of the men were overweight. Of this age group, 19 per cent of the females were

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[1] In contrast to the national report, the nutrient intakes of individuals were not classified in the Alberta report; rather, the median intake of each physiological group was assessed against the standard.

[2] Ponderal index = $\frac{\text{height (inches)}}{\sqrt[3]{\text{weight (pounds)}}}$

[3] The validity of the application of the ponderal index to women has not been adequately examined. It therefore is possible that the overweight figures reported for them may be questionable.

considered to be obese, as were seven per cent of the males. Among elderly women (65 years and over), 68 per cent were overweight and 43 per cent of these were considered to be obese. Among elderly men, 70 per cent were overweight, with 29 per cent of these considered to be obese. Therefore, except for the age group 20-39 years, men were slightly more likely to be overweight. However, among overweight persons, women were more likely than men to be categorized as obese.

It is probable that two factors are involved in the high incidence of overweight adults in Alberta. First of all, even small caloric excesses over long periods of time will lead to overweight. For example, a daily excess of 120 Kcal[4] will result in a gain of approximately one pound per month. Secondly, a sedentary life style among those who are overweight results in a decreased need for calories so that excesses are converted to body fat even when intakes remain relatively low.

The median caloric (energy) intake of children from one to seven years of age was found to be higher than is usually recommended. The median intake of adolescent girls, especially for 18-year-olds, was below the recommended level, while that of adolescent boys was adequate. The median energy intake of women 40 - 64 years was below the accepted standard. Among males it was highest in the 20 - 39 age group, even though requirements are greatest in the 10 - 19 age group. The caloric intakes were low in the elderly, although as noted above, the prevalence of both overweight and obesity was high. The data would seem to reflect the tendency of women to diet, but it should be noted that the lower caloric intakes of women tend to result in overall poorer diets in their content of protein, vitamins, and minerals. It would appear that rather than advocating reduction of caloric intakes of overweight and obese individuals, increased activity should be encouraged.

Caloric intakes of pregnant women sampled were generally below acceptable levels for this group, but they were higher than those of non-pregnant women. This finding re-emphasizes the need to determine if currently advocated protein and caloric intakes are sufficient to support fetal growth and provide reasonable maternal weight gains.

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[4]Kcal (kilogram calorie or large calorie) is the amount of heat required to raise the temperature of one kilogram of water one degree centigrade. This is the caloric unit used to express the energy value of food.

CHOLESTEROL

Cholesterol and other lipids are a large group of organic compounds insoluble in water and soluble in fat solvents. Some lipids of nutritional importance are fatty acids, triglycerides and steroids. Blood lipids, principally cholesterol, phospholipid and triglyceride, circulate in the plasma bound to proteins.

Cholesterol comes from two sources: exogenous or dietary cholesterol (liver, other organ meats, and animal fats like butter, cream, and egg yolks), and endogenous cholesterol synthesized in the body by the liver and other organs.

Figure 1 indicates that elevated serum[5] cholesterol levels are cause for concern in a great number of the Alberta adult population.[6] The percentage of men 20 - 39 years of age at high risk (two per cent) was low in comparison to other provinces, but this figure should be viewed with caution as only 70 samples were drawn in Alberta. Of more significance is that 19 per cent of the women in the 20 - 39 age group had elevated levels, as did 21 per cent of the men and 30 per cent of the women aged 40 - 64 years. Among the elderly, 16 per cent of the men and 35 per cent of the women were found to have elevated serum cholesterol levels. The high proportion of women with elevated cholesterol may be statistically due to the higher mortality rate of men with high cholesterol. In other words, many of the men may have died at earlier ages, leaving the age group more predominantly female in composition. A debate exists as to whether the changing life style of modern women now exposes them to the same stress factors that have been commonly held to affect male health.

The standards for serum cholesterol levels used in Nutrition Canada were based on the findings of the Framingham Study.[7] Some questions have been raised concerning the suitability of this standard for women. Nevertheless, it has been demonstrated that elevated serum cholesterol combined with overweight is correlated with increased incidence of coronary heart disease among women as well as men. Although the findings of this study in relation to cholesterol and overweight are

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[5] Refers to a blood sample measurement.

[6] There is, as yet, no interpretative standard for serum cholesterol level of persons under 20 years of age.

[7] T.R. Dawber *et al*, "The Epidemiology of Coronary Heart Disease, The Framingham Inquiry", Proc. R. Soc. Med., 55:265,1962.

less than definitive, the incidence of coronary disease has important implications for Alberta health programs.

PROTEIN

Protein is a nutrient required for growth and repair of body tissues. Important food sources of protein are meat, fish, poultry, eggs, milk, cheese, grains, nuts, and dried legumes.

Protein intakes of Albertans were found to be good, with the lowest intakes among the elderly. For children five to nine, teenagers, women 20 - 39, and elderly men, low serum protein values were observed in less than five per cent of the samples. Six per cent of the pregnant women were classified at moderate risk, but the significance of this is difficult to assess as the lowering of serum protein values is a normal occurrence during pregnancy.

THIAMIN RIBOFLAVIN AND NIACIN

These three vitamins are members of the B vitamin complex. Thiamin is required to release energy from food by promoting metabolism of sugars. Riboflavin is required for the metabolism of carbohydrate, protein and fat, and is particularly involved in the release of energy to the cells. Niacin is present in all body tissues, and is involved in energy-producing reactions in cells. Good food sources of thiamin are milk, poultry, fish, pork, whole grain cereals, enriched flour and bread. Sources of riboflavin are milk, liver, broccoli, eggs, whole grain cereals and enriched flour. Sources of niacin are liver, eggs, meat, whole grain and enriched flour.

For these three nutrients, the statuses of Alberta children and pregnant women were satisfactory. The niacin status was satisfactory throughout all age samples. While the median dietary intakes of thiamin and riboflavin were satisfactory for all teenagers, 29 per cent of the girls and 17 per cent of the boys had urinary thiamin excretions[8] low enough to be in the moderate risk range. Urinary riboflavin levels for 11 per cent of this group were also at moderate risk. Among adults 20-64 years of age, the 24 hour dietary recall indicated that thiamin intakes

[8] Thiamin is a water-soluble vitamin, and any excess is excreted in the urine.

were below the standard for slightly more than 25 per cent of the women, while about 15 per cent had low excretion. Thiamin intakes were marginal for 27 per cent of the males and urinary excretions of thiamin were low in 14-23 per cent.[9] Median intakes of dietary riboflavin were satisfactory but a small percentage of this adult group had urinary riboflavin values at moderate risk.

Thiamin and riboflavin dietary intakes of elderly women were in the marginal range, with 10 per cent showing low urinary excretion. This is not surprising given the low caloric intakes of this group. Although the dietary intakes of thiamin appeared to be adequate among elderly males, 25 per cent were at moderate risk for urinary excretion. This finding is puzzling in view of the apparently adequate intakes. With regard to the vitamin B status of the elderly, it should be noted that absent reflexes, and lesions of the tongue, lips and eyelids occurred more frequently in this age group than in any other. Although it is difficult to separate these effects from common degenerative conditions, the findings are sufficient to reinforce the current concern regarding the dietary intakes of the elderly.

ASCORBIC ACID (VITAMIN C)

Vitamin C is important in the formation of collagen, a protein that helps support body structures such as bones, teeth, blood vessels, skin and tendons. Citrus fruits, tomatoes and the cabbage family contain appreciable amounts of vitamin C.

The median intakes of vitamin C were found to be adequate for all age groups, but among the elderly, intakes below 20 mg. per day (standard is 30 mg. per day) were found in seven per cent of the women and 16 per cent of the men. Intakes of less than 20 mg. were present in five per cent of the pregnant women, although excessive intakes of more than 100 mg. were present in 60 per cent. The latter strongly suggests the use of supplements.

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[9] It has been suggested that the low thiamin excretion in adult males may be related to alcohol consumption.

From Table 2, the serum ascorbate (vitamin C) values were suboptimal in 12 per cent of the children five to nine years of age, 23 per cent of the teenage boys, and 18 per cent of the teenage girls. Similarly, for adults 20-64 years, 16-21 per cent of the males and approximately five per cent of the females had serum values at moderate risk even though the median intakes were above the accepted standard. Among the elderly, 20 per cent of the men and 5 per cent of the women were considered to be at risk on the basis of serum vitamin C levels. The significance of these low serum values is not fully understood at this time.

VITAMIN A

Vitamin A is a fat-soluble vitamin required to form and maintain the healthy function of eyes, hair, teeth, gums, glands and membranes. It is also involved in fat metabolism. Good food sources of vitamin A are whole milk, eggs, margarine, liver and green and yellow vegetables.

Except for men 20-64 years old, dietary recalls indicate marginal intakes of Vitamin A in a substantial number of individuals in all age groups. However. interpretation of vitamin A status is difficult as good sources of this fat-soluble vitamin do not need to be consumed daily, and the study subjects were only asked to report their dietary intake over the previous 24 hour period.

Serum vitamin A levels were adequate for all age groups. But this may not be significant as only severe deficiency would produce low serum levels. The lack of clinical disease should also be regarded with caution as the earliest sign of vitamin A deficiency is night blindness for which subjects were not tested.

VITAMIN E

Vitamin E (or tocopherol) is used in the formation of normal red blood cells, muscles and other tissues. It also protects fat in the body's tissue from abnormal breakdown. Food sources of vitamin E are vegetable oils, whole grain cereals and wheat germ.

The vitamin E status, based on serum tocopherol, was satisfactory for all Alberta age groups. The adequate level of this vitamin reflects the fact that it is present in a wide range of foods.

CALCIUM

Calcium is a mineral required in the building of strong bones and teeth, blood clotting, and nerve and muscle activity. Good food sources include milk, cheese and other milk products.

As shown in Table 3, calcium intakes below the accepted standard were found in 60 per cent of the children five to nine years of age, although only a small proportion (1.3 per cent) had low serum calcium values (Table 4). Teenage girls tended to have marginal intakes of calcium, while teenage boys had adequate ones. The serum calcium levels of both groups were within normal range. In the adult group, calcium intakes for 28 per cent of the 20-39 year old women and 41 per cent of those in the 40-64 year age group were below the accepted standard. They tended to be low in the elderly, with 55 per cent of the women and 30 per cent of the men below accepted standards and correspondingly at low risk in serum values. Among the pregnant women, 60 per cent had calcium intakes which were below the adequate standard while serum values indicated two per cent to be at moderate risk.

VITAMIN D

Vitamin D is commonly called the "sunshine" vitamin, and is required for maintaining strong bones and teeth, and aiding the body in utilization of calcium and phosphorus. Food sources are fortified milk and margarine, eggs, and fish liver oil.

Based on dietary recall, intakes of Vitamin D (Table 5) for about 69 per cent of Alberta children in the 0-4 age group, and 93 per cent of the five to nine year olds were sub-standard. On the other hand, intakes of about 1000 I.U.[10] per day, which are considered excessive, were found in about seven per cent of the younger group. Similarly, vitamin D intakes of 65 per cent of the pregnant women sample were below the accepted standard, while intakes in excess of 1000 I.U. per day were found in five per cent. The high and potentially dangerous intakes were due to vitamin supplementation.

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[10] I.U. = International unit. This figure represents the biological activity of a nutrient or substance. It is a specific reference standard of known potency that produces in a laboratory animal specific effects over a specified period of time.

Intakes of vitamin D were only marginal in many teenage boys and girls. Intakes were also low for many adults (20-64 years old) and for elderly persons. The median intake of this vitamin was 50 I.U. for elderly women and 75 I.U. for elderly men, indicating a need for increased intake of vitamin D for this age group. In fact, the vitamin D intakes were low enough to be of concern if the elderly should happen to be confined for long periods of time without exposure to sunlight.

IRON

Iron is a trace mineral which is essential for the hemoglobin of red blood cells, and is also necessary for the prevention of nutritional anemia. Hemoglobin is a pigment in the oxygen-carrying component of red blood cells. It has the main functions of carrying oxygen from the lungs to the tissues, and transporting carbon dioxide back to the lungs. Good food sources of iron are liver, red blooded meats, and egg yolks.

To summarize the findings with respect to iron status, three tables are provided. Table 6 indicates the dietary iron intake, Table 7 gives the serum transferrin saturation[11] and Table 8 shows the values for hemoglobin.

These tables show that iron status was poor in nearly all ages, and in both sexes in the Alberta sample. There was little evidence of anemia in infants under one year of age, which was probably due to supplemental iron in commercial formulas and cereals. Table 6 indicates that in the 0-4 age group, 48 per cent were below the adequate standard for dietary iron although the median intake was above the standard. As well, the state of iron reserves as judged by serum transferrin saturation (Table 7) shows that 42 per cent of the group could be in danger of developing anemia, and 24 per cent of these were classified at high risk. Children 5 - 9 years of age also had poor iron status. Similarly, both the iron intakes and serum transferrin values of adolescents were low; 41 per cent of the girls and 14 per cent of the boys had poor iron stores.

Women in the 20 - 64 age group had marginal intakes of iron very close to inadequate levels, and their serum transferrin values showed that they had lower iron stores than men in the same age group. A small

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[11] Serum transferrin is an iron-protein complex. This is the form in which iron is transported in the blood. Serum transferrin saturation is an expression of the ratio of serum iron to the total iron binding capacity of red blood cells.

percentage (10 per cent) of the women had developed low hemoglobin values (Table 8). A larger proportion of the 20 - 39 year old men in the Alberta sample had hemoglobin values classified at risk than men in the same age group in the other provinces. Iron intakes of 55 per cent of the elderly women and 25 per cent of the elderly men were below the amount considered necessary for the maintenance of iron status. In this group, 27 per cent of the women and 21 per cent of the men had low hemoglobin values. Iron intakes were marginal for about one-half of the pregnant women surveyed. This was reflected in the fact that about 25 per cent were at moderate risk, and eight per cent were at high risk for serum transferrin saturation. On the other hand, 40 per cent of the pregnant sample had intakes in excess of 44 mg. per day (the recommended intake being 18 mg.). At these levels there is danger of iron overload. The high intakes indicate the use of supplements.

FOLIC ACID (FOLACIN)

Folic acid vitamin (folacin) is essential for the synthesis of certain body proteins and genetic materials, as well as for the formation of red blood cells.

The paucity of data available on the folic acid content of foods made it impossible to estimate folacin intake, so only serum folate values have been given. Also, the amount of folic acid in a food serving is highly variable depending upon the preparation procedures involved, with losses ranging as high as 90 per cent. Storage of fresh produce for a few days and prolonged cooking periods are particularly detrimental to folacin levels in foods. Diets consisting of highly refined foods are likely to be deficient in this vitamin, but enrichment of foods with folic acid is not considered feasible.

Serum folate values (Figure 2) showed that 55 per cent of infants and children were at risk, with five per cent of the 0 - 4 year olds and 17 per cent of those 5 - 9 years old falling in the high risk category. These figures were high when compared to the same age groups in other provinces, but the significance of the finding is unknown.

Among the Alberta teenagers surveyed, serum folate values indicated that 78 per cent of the girls and 60 per cent of the boys were at risk, and, of these, 12 per cent of the females and five per cent of the males were at high risk or low folate stores. Low values were also observed in 81 per cent of the males 20 - 39 years old (32 per cent at high risk), and in 60 per cent of the men in the 40 - 64 year age group. Of the women 20 - 39 and 40 - 64 years old, 72 per cent and 58 per cent respectively had low serum folate values, with six per cent and 12 per cent in the high risk category. In the senior group, low serum folate levels were observed in about 70 per cent.

Forty-five per cent of pregnant women had low enough serum folate levels to be classified at risk, and nine per cent of these had values in the high risk category. The low values for this sample are of particular concern, since pregnant women with low levels of folic acid have an increased tendency to develop megaloblastic changes in the bone marrow.

IODINE

Iodine is a trace mineral that is an important constituent of the thyroid hormone, thyroxine, which in turn is necessary in regulating the basal metabolic rate in the body. Goitre is a condition which causes enlargment of the thyroid gland due to a lack of iodine (simple goitre), an overproduction of thyroid hormone in hyperthyroid states, or a decreased production of thyroid hormone in hypothyroid states. Substances which may produce goitre by interfering with the production of the thyroid hormone are known as goitrogens. Food sources of iodine are iodized salt, fish and sea food.

Alberta is one of the areas in Canada in which goitre was evident. While it was not found in children younger than five years of age (Figure 3), Grade I goitre[12] was present in 20 per cent of those aged 5 - 9, 30 per cent of teenage girls, and 38 per cent of teenage

[12] In this survey, three sizes of goitre were recorded according to World Health Organization classifications: Grade I - palpable goitres that are more than four to five times enlarged but not visible unless the head is thrown back and the neck extended; Grade II - goitres that are visible when the head is in a normal position, and Grade III - goitres that are large and prominent.

boys. Thyroid enlargement was also observed in a significant proportion of the adults. For example, Grade I goitre was seen in 35 per cent of the women 20 - 39 years of age and in 29 per cent of those aged 40 - 64 years, while Grade II or III goitre was observed in nine per cent of the females 20 - 39 years of age and in five per cent of those 40 - 64 years old. In the males, only Grade I goitre was observed and it was found in 18 per cent of the 20 - 39 age category and in three per cent of the 40 - 64 group. Among the elderly, Grade I goitre was observed in 20 per cent of the women and three per cent of the men.

Enlarged thyroids were observed in 45 per cent of the pregnant women, and six per cent of these were classified as Grade II or Grade III goitres. The significance of the high incidence of enlarged thyroid in pregnant women is uncertain as it is difficult to separate normal thyroid enlargement during pregnancy from goitre caused by other factors.

The high incidence of goitre is an enigma of the survey, neither its clinical significance nor its etiology has been identified. The high incidence apparently is not due to a deficient intake of iodine as the values of this nutrient were higher than anticipated on the basis of data from a decade ago. One potential cause may be goitrogens. These are substances present in some foods that are capable of producing goitre by interfering with the production of thyroid hormone. They have been identified in rapeseed, the red skin of peanuts, and the Brassica vegetables (e.g., cabbage, cauliflower, and turnip). A second potential cause is iodine excess due to its presence in iodophors, red dyes, dough conditioners, animal feeds, and the silver iodine used for seeding clouds. Research is currently being encouraged to clarify this issue.

SUMMARY

While the Alberta segment of Nutrition Canada revealed no actual deficiency diseases, it pinpointed a number of concerns and potentially dangerous conditions which are a paradox in a so-called "land of plenty". Although some of these problems can be traced to economic inequities, most of them are probably the result of poor nutrition knowledge. All health workers must assume some responsibility for alleviating this situation. If for no other reason than to make the most effective use of our food resources and our health dollars, the time has come for a concerted increase in nutrition education for all levels of the population.

TABLE 1 PERCENTAGE DISTRIBUTION OF SELECTED GROUPS IN ALBERTA NUTRITION SAMPLE BY PONDERAL INDEX*

Ponderal Index	Males			Females		
	20 - 39	40 - 64	65+	20 - 39	40 - 64	65+
0.00 - 9.99	--	--	--	0.1	0.2	0.3
10.00 - 10.49	--	--	--	0.1	0.7	3.3
10.50 - 10.99	--	0.6	3.2	4.9	1.6	4.5
11.00 - 11.49	0.4	1.3	5.8	1.5	14.6	10.3
11.50 - 11.99	16.0	16.7	40.2	17.4	12.6	33.7
12.00 - 12.49	33.9	53.5	20.6	31.8	18.1	16.3
12.50 - 12.99	34.8	20.0	26.6	18.6	27.5	15.8
13.00 - 13.49	11.5	3.6	0.1	16.2	21.6	15.2
13.50 - 13.99	3.0	3.5	1.9	6.9	2.0	--
14.00 - 14.49	--	0.1	1.1	--	--	--
14.50 +	--	--	--	1.6	--	--
SAMPLE SIZE	66	89	68	90	101	54
PERCENTILES						
5	11.79	11.68	11.44	10.94	11.13	10.63
25	12.20	12.01	11.72	12.02	11.80	11.52
50	12.49	12.14	12.04	12.40	12.59	11.83
75	12.92	12.61	12.51	12.99	12.98	12.65
95	13.08	13.15	12.82	13.65	13.32	13.01

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Risk categories--all persons:

High risk	0.00 - 11.59
Moderate risk	11.60 - 12.49
Low risk	12.50 and above

TABLE 2 PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITION SAMPLE BY SERUM VITAMIN C LEVELS*

Serum Vitamin C Level (mg./100 ml.)	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0.00 - 0.19	--	--	2.2	0.2	--	0.1	2.4	1.2	--	--	--
0.20 - 0.39	--	1.9	0.7	21.0	16.4	19.6	3.7	2.4	3.5	5.0	1.8
0.40 - 0.59	0.6	9.9	20.2	6.6	15.7	16.3	11.4	19.8	16.5	17.7	9.3
0.60 - 0.99	32.0	19.7	20.5	41.8	41.4	28.7	33.9	20.2	29.0	22.8	30.0
1.00 - 1.49	23.1	44.5	34.4	23.8	25.1	28.6	39.2	49.4	30.1	46.5	47.0
1.50 - 1.99	33.6	14.9	21.0	5.7	0.5	4.6	7.8	6.3	18.3	6.9	11.1
2.00 +	9.9	7.9	--	--	--	1.1	0.6	--	--	0.2	--
SAMPLE SIZE	36	96	102	70	88	68	94	92	102	55	53
PERCENTILES											
5	0.60	0.52	0.43	0.28	0.24	0.26	0.37	0.43	0.36	0.39	0.45
25	0.93	0.84	0.60	0.47	0.54	0.49	0.69	0.65	0.69	0.65	0.80
50	1.24	1.13	1.03	0.75	0.67	0.78	0.95	1.05	0.97	1.09	1.07
75	1.69	1.42	1.38	1.11	1.04	1.10	1.31	1.32	1.45	1.39	1.32
95	2.30	2.17	1.76	1.53	1.35	1.59	1.68	1.65	1.76	1.58	1.75

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Risk Categories (mg./100 ml.)--both sexes:

Age Group	High Risk	Moderate Risk	Low Risk
0 - 19	0.00 - 0.19	0.20 - 0.59	0.60 and above
20+	0.00 - 0.19	0.20 - 0.39	0.40 and above

TABLE 3

PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITION SAMPLE BY DAILY DIETARY INTAKE OF CALCIUM*

Dietary Intake of Calcium (mg./day)	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0 - 299	4.1	1.7	3.3	7.9	1.7	10.6	4.2	23.0	23.5	21.4	9.2
300 - 399	5.9	1.8	3.2	0.2	10.6	13.7	3.2	1.7	2.6	20.1	7.4
400 - 499	3.5	27.8	4.4	0.7	7.0	5.8	3.3	3.2	14.9	13.8	7.4
500 - 599	15.8	2.9	6.9	3.0	8.3	19.7	7.7	10.4	16.0	14.8	1.8
600 - 699	7.2	2.4	4.5	8.8	23.7	7.1	14.0	8.2	8.0	2.1	1.8
700 - 799	9.1	7.3	4.8	11.5	7.8	16.0	13.3	6.2	10.9	4.4	7.4
800 - 899	8.6	3.2	1.2	3.7	4.5	6.9	1.8	6.5	8.0	1.2	9.2
900 - 999	6.4	14.6	4.7	5.2	8.5	1.2	8.7	15.5	3.0	4.0	3.7
1000 - 1199	12.1	10.5	7.4	14.3	10.1	10.6	17.2	9.5	9.8	3.4	12.9
1200 - 1799	23.2	20.5	30.3	17.0	11.6	5.7	19.9	15.3	1.6	14.1	31.4
1800 +	3.4	6.2	28.3	27.0	5.5	2.0	5.8	0.0	0.9	0.0	7.3
SAMPLE SIZE	83	99	97	66	89	68	87	90	101	54	54
PERCENTILES											
5	340	407	396	265	323	252	332	205	116	174	245
25	569	420	799	769	577	422	656	400	308	324	558
50	879	919	1,309	1,008	655	572	943	701	539	448	1,020
75	1,223	1,248	1,928	1,847	1,028	862	1,212	999	799	776	1,424
95	1,668	1,866	3,003	2,425	1,958	1,752	1,955	1,255	1,163	1,472	1,957

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Classification of intakes (mg./day)--both sexes:

Age Group	Inadequate	Marginal	Adequate
0 - 11 mo.	below 400	400-500	above 500
1 - 5 yrs.	below 500	500-700	above 700
6 - 8 yrs.	below 500	500-1000	above 1000
9 - 16 yrs.	below 700	700-1200	above 1200
17 - 21 yrs.	below 600	600-900	above 900
22 + yrs.	below 300	300-500	above 500
Pregnant Women	+500	+500-700	+700

TABLE 4

PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITION SAMPLE BY SERUM CALCIUM LEVELS*

Serum Calcium Level (mg./100ml.)	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0.0 - 8.9	3.0	1.3	--	--	--	--	--	--	--	0.7	2.0
9.0 - 9.9	7.1	50.2	35.9	29.4	28.3	59.3	45.3	75.3	69.7	58.4	87.3
10.0 - 10.9	89.4	47.7	63.5	69.7	69.1	40.2	54.1	24.2	29.0	40.3	10.2
11.0+	--	0.1	0.2	0.3	2.1	--	--	--	0.8	0.1	--
SAMPLE SIZE	37	93	100	70	87	68	95	91	102	54	48
PERCENTILES											
5	9.43	9.45	9.63	9.64	9.58	9.37	9.51	9.39	9.30	9.19	9.17
25	10.12	9.89	9.95	9.95	9.99	9.65	9.89	9.96	9.66	9.67	9.41
50	10.23	9.99	10.12	10.21	10.17	9.89	10.00	9.89	9.77	9.89	9.67
75	10.30	10.25	10.34	10.46	10.39	10.17	10.25	9.98	10.01	10.15	9.86
95	10.60	10.73	10.52	10.84	10.82	10.44	10.55	10.44	10.75	10.77	10.43

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Risk categories (mg./100 ml.)--all ages, both sexes:

High risk	0.0 - 8.9
Moderate risk	--
Low risk	9.0 and above

TABLE 5

PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITION SAMPLE BY DAILY POTENTIAL DIETARY INTAKE OF VITAMIN D*

Potential Dietary Intake of Vitamin D (I.U./day)	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0 - 149	26.3	36.1	24.3	50.2	61.7	64.0	47.4	64.2	79.9	67.4	31.4
150 - 249	19.3	26.9	19.3	9.1	11.6	18.2	19.1	17.1	11.4	20.5	14.8
250 - 399	23.0	29.9	22.4	18.9	9.0	4.1	22.1	1.7	1.1	4.2	18.5
400 - 599	9.0	3.6	25.4	20.0	13.5	6.7	5.3	10.8	2.0	5.5	16.5
600 - 799	11.2	2.2	2.5	--	3.4	6.5	5.3	4.5	5.0	1.9	11.0
800 +	10.2	0.6	5.2	1.2	--	--	--	1.1	--	--	7.3
SAMPLE SIZE	83	99	97	66	89	68	87	90	101	54	54
PERCENTILES											
5	60	24	--	--	--	--	--	--	--	--	--
25	148	65	150	15	15	32	74	--	--	12	128
50	291	210	264	144	125	80	156	104	51	52	253
75	538	318	483	340	262	218	319	188	117	194	541
95	1,091	495	951	495	563	676	620	622	600	598	1,050

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Classification of intakes (I.U./day)--all persons:

Inadequate	0 - 149
Marginal	150 - 399
Adequate	400 and above

TABLE 6

PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITIONAL SAMPLE BY DAILY DIETARY INTAKE OF IRON*

Dietary Intake of Iron (mg./day)	Children			Males			Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0.0 - 5.9	25.3	2.7	7.9	--	3.7	5.2	19.4	4.8	17.7	18.2	3.7
6.0 - 7.9	22.9	17.0	5.3	--	0.5	8.6	23.0	10.8	6.7	13.4	7.4
8.0 - 9.9	10.6	27.5	10.5	1.5	7.2	11.4	9.5	15.4	11.5	22.9	7.4
10.0 - 15.9	33.5	39.0	45.9	23.5	47.5	47.8	33.2	39.4	47.5	21.4	27.7
16.0 - 31.9	2.2	13.4	25.9	61.2	31.3	23.5	14.1	25.0	13.0	21.9	12.8
32.0 +	4.9	--	2.6	13.2	8.8	3.0	0.3	3.9	2.9	1.9	40.7
SAMPLE SIZE	83	99	97	66	89	68	87	90	101	54	54
PERCENTILES											
5	2.8	6.4	5.1	13.1	8.4	5.6	3.5	6.5	3.9	4.9	7.4
25	5.9	8.5	10.2	15.6	12.1	9.9	6.5	8.8	8.2	7.3	10.9
50	8.2	10.7	12.4	17.7	14.9	13.2	9.4	12.1	10.3	9.4	18.6
75	11.2	13.3	17.9	22.9	19.4	16.6	13.6	16.3	13.1	13.7	80.2
95	37.5	17.5	24.9	47.0	38.7	30.9	18.5	22.9	22.9	21.5	219.6

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Classification of intakes (mg./day):

Group	Inadequate	Marginal	Adequate
0 - 8 yrs., both sexes	0.0 - 5.9	6.0 - 7.9	8.0 and above
9 - 16 yrs., both sexes	0.0 - 9.9	10.0 - 14.9	15.0 and above
17 + yrs., males	0.0 - 5.9	6.0 - 9.9	10.0 and above
17 - 54 yrs., females	0.0 - 9.9	10.0 - 14.9	15.0 and above
55 + yrs., females	0.0 - 5.9	6.0 - 9.9	10.0 and above
Pregnant women	(age level plus) +2	+2 - 3	above 3

TABLE 7 PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITIONAL SAMPLE BY TRANSFERRIN SATURATION*

Percentage of Transferrin Saturation	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0.0 - 15.9	23.9	19.3	1.8	5.2	1.4	--	9.9	10.3	12.2	--	8.2
16.0 - 17.9	3.9	4.4	6.3	8.4	0.1	2.2	11.4	1.6	11.7	16.3	4.1
18.0 - 19.9	14.6	3.4	5.6	2.8	2.2	6.8	19.4	11.5	2.9	4.0	12.5
20.0 - 29.9	53.1	49.3	66.0	64.0	54.5	59.4	42.9	62.0	46.5	60.5	56.0
30.0 - 39.9	2.4	22.8	14.2	17.8	32.9	20.7	12.9	13.6	24.2	15.2	14.3
40.0 +	1.2	--	5.3	1.0	8.0	10.3	2.6	0.2	1.6	3.2	4.0
SAMPLE SIZE	35	93	100	70	87	68	95	91	102	54	48
PERCENTILES											
5	9	13	16	6	21	19	13	13	12	16	14
25	17	18	21	21	25	22	18	20	18	20	19
50	20	24	24	25	28	27	22	23	25	23	25
75	26	28	29	28	31	31	27	28	30	29	29
95	28	33	42	34	47	46	36	35	37	33	39

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Risk categories (% saturation)--all persons:

High risk	0.0 - 15.9
Moderate risk	16.0 - 19.9
Low risk	20.0 and above

TABLE 8 PERCENTAGE DISTRIBUTION OF ALBERTA NUTRITIONAL SAMPLE BY HEMOGLOBIN LEVEL*

Hemoglobin Level (g./100 ml.)	Children		Males				Females				Pregnant Women
	0 - 4	5 - 9	10 - 19	20 - 39	40 - 64	65+	10 - 19	20 - 39	40 - 64	65+	
0.00 - 8.99	--	--	--	--	--	--	--	--	--	--	--
9.00 - 9.99	--	0.4	--	5.1	--	--	--	0.1	--	--	1.9
10.00 - 10.49	4.0	--	0.2	--	--	--	--	--	0.3	4.8	3.9
10.50 - 10.99	3.0	1.8	--	--	--	3.4	0.9	5.1	--	--	5.8
11.00 - 11.49	6.2	0.5	--	--	1.6	--	0.9	5.1	4.7	20.7	7.8
11.50 - 11.99	5.6	2.1	--	--	--	--	0.2	1.2	4.9	1.1	13.7
12.00 - 12.99	61.8	41.9	17.4	--	0.4	4.3	21.3	12.5	14.8	25.7	29.3
13.00 - 13.99	18.0	31.7	27.5	8.4	2.9	13.5	45.3	39.1	42.2	21.5	29.4
14.00 - 15.99	0.9	21.1	46.6	59.3	34.9	51.4	30.5	36.1	28.2	25.1	7.8
16.00 +	--	0.1	7.6	26.8	59.5	26.7	0.3	0.2	4.2	0.4	--
SAMPLE SIZE	79	97	97	70	85	64	89	89	100	55	51
PERCENTILES											
5	10.7	12.0	12.2	9.2	13.9	12.6	12.4	10.9	11.3	11.4	10.4
25	12.0	12.3	13.0	14.8	14.9	14.0	13.0	13.0	12.9	11.4	11.6
50	12.4	13.0	14.2	15.8	16.4	15.0	13.6	13.6	13.6	12.8	12.4
75	12.8	13.8	14.6	16.0	17.0	16.0	14.0	14.2	14.2	14.0	13.2
95	13.8	14.6	16.8	17.0	18.0	17.6	15.0	15.0	15.6	14.9	14.4

Source: Nutrition Canada: The Alberta Survey Report, 1975.

* Risk categories (g./100 ml.):

Group	High Risk	Moderate Risk	Low Risk
0 - 1 yrs., both sexes	0.00 - 8.99	9.00 - 9.99	10.00 and above
2 - 5 yrs., both sexes	0.00 - 9.99	10.00 - 10.99	11.00 and above
6 - 12 yrs., both sexes	0.00 - 9.99	10.00 - 11.49	11.50 and above
13 - 16 yrs., males	0.00 - 11.99	12.00 - 12.99	13.00 and above
13 - 16 yrs., females	0.00 - 9.99	10.00 - 11.49	11.50 and above
17+ yrs., males	0.00 - 11.99	12.00 - 13.99	14.00 and above
17+ yrs., females	0.00 - 9.99	10.00 - 11.99	12.00 and above
Pregnant women	0.00 - 8.99	9.00 - 10.49	10.50 and above

FIGURE 1 DISTRIBUTION OF SERUM CHOLESTEROL VALUES IN ALBERTA NUTRITION SAMPLE BY SEX AND AGE GROUPS

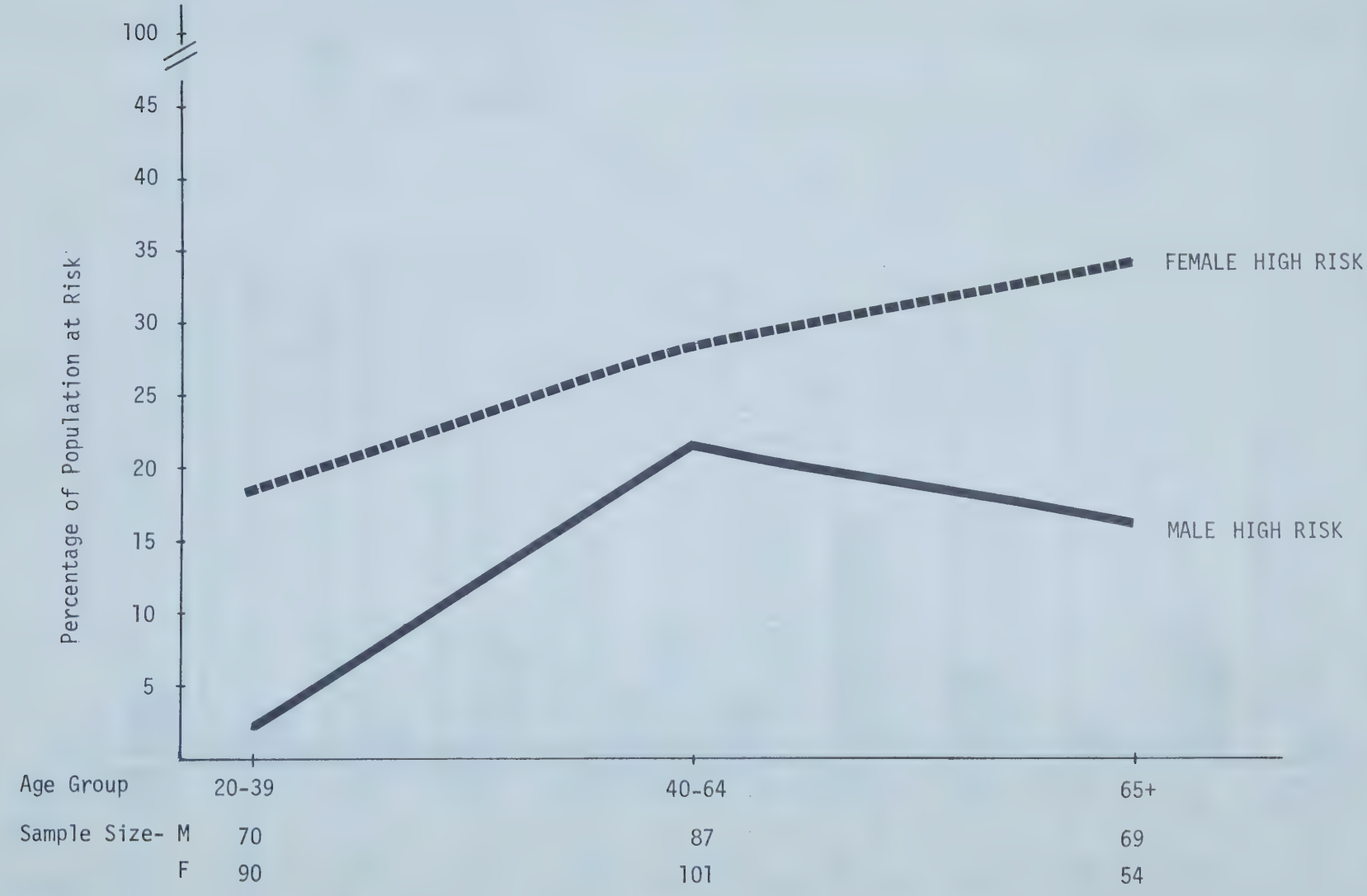
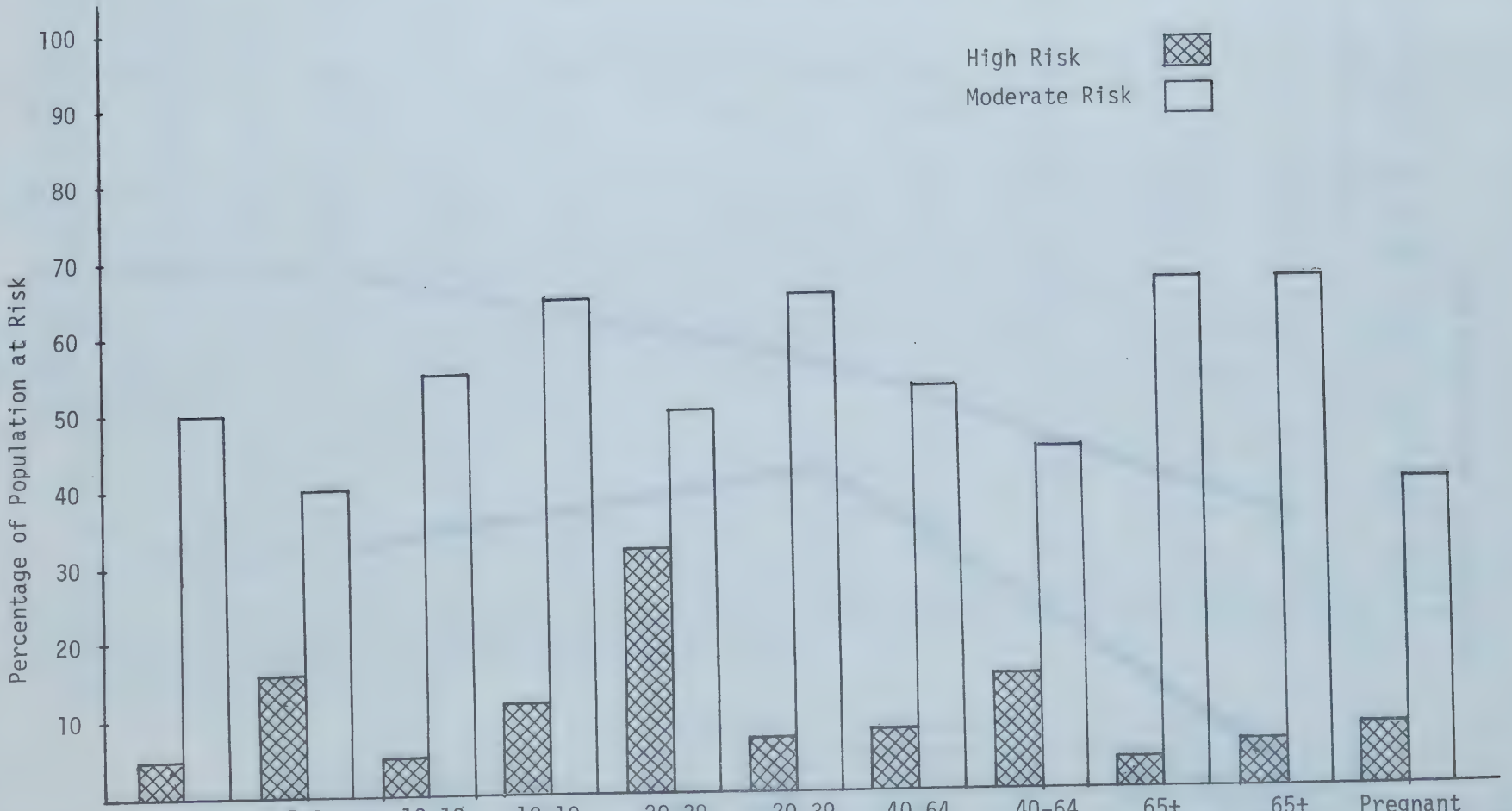
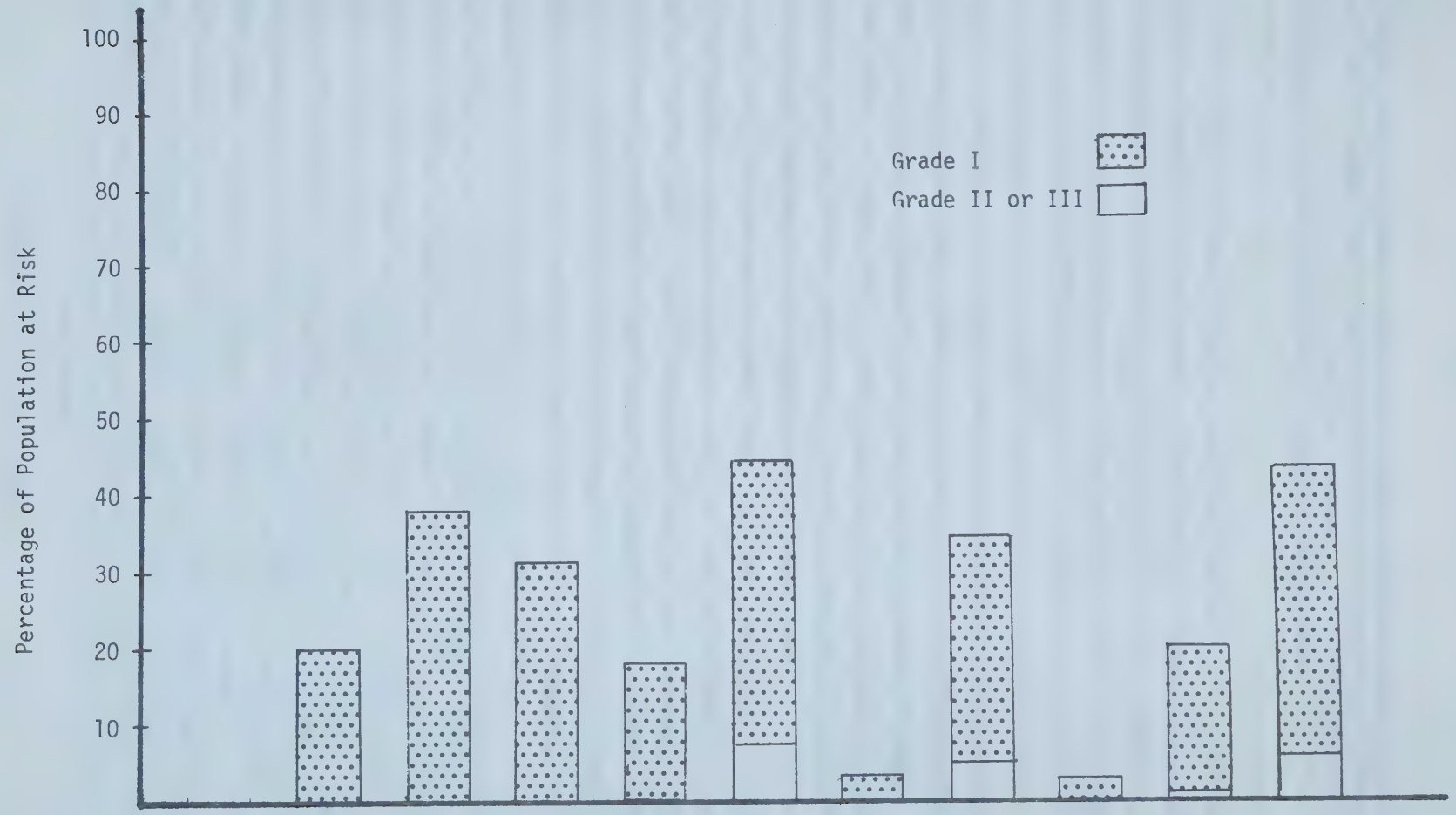


FIGURE 2 DISTRIBUTION OF SERUM FOLATE VALUES IN ALBERTA NUTRITION SAMPLE BY AGE AND SEX GROUPS



Age Group	0-4	5-9	10-19	10-19	20-39	20-39	40-64	40-64	65+	65+	Pregnant Women
Sex	MF	MF	M	F	M	F	M	F	M	F	
Sample Size	27	69	72	77	43	64	68	74	46	33	38

FIGURE 3 DISTRIBUTION OF CLINICAL ASSESSMENT OF GOITRE IN ALBERTA NUTRITION SAMPLE BY SEX AND AGE GROUPS



Age Group	0-4	5-9	10-19	10-19	20-39	20-39	40-64	40-64	65+	65+	Pregnant Women
Sex	MF	MF	M	F	M	F	M	F	M	F	
Sample Size	83	99	96	87	66	87	86	100	67	52	53

ALBERTA VITAL STATISTICS

Donna Angus*

Vital events refers to demographically important stages in an individual's life: birth, marriage and death. Divorces, while not collected within the vital statistics system, are usually published with births, marriages and deaths as another category of vital events.

Record-keeping of vital events originated through the recognition of the need for permanent, legal records for purposes of individual identification, verification of age, detection of bigamy, etcetera. Historically, these records were collected by the clergy, as the church was the usual location of baptisms, marriages, and burials. Eventually, the recording and collection of vital events became statutory, and is today covered by provincial legislation in Alberta.

Vital statistics is a term referring to the numerical summation of individual vital events for the population that is resident in a specified geographical area; for example, the number of livebirths occurring to the residents of Calgary city.[1] Vital statistics provide the "numerator" data for the calculation of various indicators of the population events in an area: birth rate, marriage rate, death rate. The only component of population events not covered by vital statistics is migration.

The Vital Statistics Act requires that all births and stillbirths, deaths, marriages and adoptions be registered with the Director of Vital Statistics, a division of Alberta Social Services and Community Health. The legislation includes provisions for amendments to such registrations, stipulation of conditions under which certificates and copies may be issued, ensurance of confidentiality of records, and cautions against failure to comply with, or violation of, the provisions and regulations of the Act.

In addition to the collection and validation of records, the Division of Vital Statistics is also responsible for dealing with all requests related to these documents such as change of name and the production of certificates. The division has over 3,500,000 registrations on file. The manual

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*Donna Angus is a research assistant in Research and Planning.

[1]Vital Statistics rates are calculated by place of residence of the person experiencing the vital event, rather than place of occurrence of the event itself.

process of maintaining and retrieving information from such a large paper file is time consuming, and generally inefficient. To alleviate this problem, a new microfilm system is now being implemented at the division.

Although vital statistics could be produced from the original document file system, it would be with great difficulty. An efficient, computerized record system is necessary to facilitate the production of reliable and timely vital statistics data. Research and Planning of Alberta Social Services and Community Health maintains a computerized data base of selected variables from all vital statistics registration documents in Alberta (Appendix). The master file for the data base is on magnetic tape, with new registrations and amendments being added periodically. Statistics Canada receives a magnetic tape copy of the computerized information, as well as microfilm copies of all registration documents. It is the responsibility of Statistics Canada to reconcile out-of-province events back to the province of residence and to annually publish summary reports for each province. Statistics Canada also provides limited unpublished data on special request.

The purpose of this article is to provide basic vital statistics rates for the cities of Edmonton and Calgary and for each of the 15 census divisions in Alberta for 1973 as sub-provincial data for Alberta are not published by Statistics Canada.[2] Data on divorces from the Attorney General's Department are also included.

The tables included in this article, are based on a 1973 count of four types of vital events: births, deaths, marriages, and divorces. Highlights of each of these tables will be discussed.

	SUBJECT
FIGURE 1	Map of Alberta showing census divisions
TABLE 1	Crude birth and death rates, and rates of natural increase, for census divisions
2	Crude birth and death rates, and rates of natural increase, Canada and the provinces

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[2]Particularly for areas with a small population base, the number of births/deaths/marriages may fluctuate substantially from one year to another, similarly affecting any rates which might be calculated. The reader should be cautioned, therefore, not to draw long-term conclusions from just this 1973 data.

BIRTHS

TABLE 3 Age-specific fertility rates for Alberta
4 Masculinity sex ratio at birth for census divisions
5 Multiple births for Alberta
6 Legitimate and illegitimate births for census divisions

DEATHS

7 Deaths by sex for census divisions
8 Age-sex specific mortality rates for Alberta
9 Infant mortality rates by sex for census divisions
10 Average life expectancy at birth for census divisions

MARRIAGES

11 Marriage rates for census divisions
12 Age-sex specific marriage rates for Alberta
13 Distribution of age at marriage by sex for Alberta

DIVORCES

14 Crude divorce rates for Canada and the provinces
15 Divorces by court house location in Alberta
16 Divorces by marital status at time of marriage, by sex, for Alberta
17 Divorces by duration of marriage for Alberta

BIRTHS

The fertility of a given population is assessed by relating the number of births to the size of that population. When the total population is used as the base, the result is known as a *crude* birth rate. If, however, the calculation uses a specific section of the population that is "at risk" (i.e., women of child-bearing age), it is known as a *specific* birth rate.

A total of 29,272 livebirths occurred to Albertans in 1973, for a crude birth rate of 17.39 births per 1,000 population (Table 1). Among the 15 census divisions (hereafter abbreviated as C.D.), the crude birth rate ranged from a low of 11.01 (C.D. 10) to 22.72 (C.D. 15). Refer to Figure 1 for boundaries of census divisions. Northern Alberta had a somewhat higher crude birth rate than southern Alberta. The cities of Calgary and Edmonton experienced birth rates approximating the provincial average.

In comparison with other provinces, Alberta's crude birth rate in 1973 was higher than the Canadian average (15.5), and fifth in rank after the two territories, Newfoundland and New Brunswick (Table 2).

Table 3 presents age-specific birth rates (i.e., the birth rate for women of child-bearing age - 15 to 49 years) broken down into five-year age groups. The highest age-specific birth rate was for women 20-24 years; the lowest rates were for women over 40 years of age. Over two-thirds of all births occurred to women 20-29 years old.

Of the 29,272 Alberta livebirths in 1973, 15,039 were males (51.38 per cent) and 14,233 were females (48.62 per cent). The distribution of livebirths by sex can be summarized by the index *masculinity sex ratio at birth* -- the number of males per 100 females. This ratio was 105.66 for Alberta in 1973 (i.e., for every 100 females born, 105.66 males were born) (Table 4). The sex ratio at birth varied among the census division from 89.06 to 121.11 Extreme fluctuations in the ratio are usually due to chance factors in an area with a small population base.

Table 5 shows that there were 512 twins born in Alberta in 1973, or approximately 18 twins per 1000 livebirths.

Over 11 per cent of Alberta livebirths were illegitimate,[3] ranging from a low of four per cent in C.D. 4 to a high of 22.5 per cent in C.D. 12 and 22.3 per cent in C.D. 9 (Table 6). Edmonton had a much higher percentage illegitimate than Calgary (13.34 per cent compared to 8.8 per cent), and northern Alberta was higher than southern Alberta. Because the definition of illegitimacy varies among the provinces, comparison of Alberta's illegitimacy rate with those of other provinces is not valid.

DEATHS

The mortality of a given population is assessed by relating the number of deaths (by all causes or specific causes) to the size of that population. As with the birth rates, crude death rates are based on total population while specific death rates are based on some section of that population.

There was a total of 10,748 deaths to Albertans in 1973, for a crude death rate of 6.38 deaths per 1,000 population (Table 1). Among the census divisions, the crude death rate ranged from 5.27 (C.D. 14) to 8.94 (C.D. 3).

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[3] Illegitimacy in Alberta is defined as a livebirth where the parents are not married.

Because the Canadian provinces have varying age composition of their populations, comparisons of their crude death rates are misleading. Provinces with an "older" population naturally experience a higher number of deaths. By standardizing each province's crude death rate to the age distribution of the 1973 Canadian population, the effects of variation in age composition can be eliminated. Table 2 presents these age-standardized crude death rates for the provinces and territories. Alberta's rate (8.6) is substantially lower than the Canadian average (10.3), and lower than the rates for all other provinces except Saskatchewan (8.3).

Of the Alberta deaths, 61.6 per cent were males and 38.4 per cent, females (Table 7). There was a substantial variation in this breakdown among the census divisions from 57.0 per cent males in C.D. 3 to 71.2 per cent males in C.D. 15. However, this variation may be largely due to differences in the sex composition of the different census divisions.

Table 8 and Figure 2 present age-sex specific death rates for the province. Female rates were lower than male rates for all 18 age groups.

Infant Mortality

A total of 423 infant deaths[4] occurred to Albertans in 1973, for an infant mortality rate of 14.45 (number of infant deaths per 1,000 livebirths). Among the census divisions, this rate varied from 10.02 in C.D. 1 to 20.68 in C.D. 7 (Table 9). Male infant mortality is normally higher than that for females, and this is apparent in the Alberta data (16.36 for males as compared to 12.44 for females). These sex-specific infant mortality rates also varied among the 15 census divisions.

Average Life Expectancy at Birth

Average life expectancy at birth can be interpreted as the *average* number of years an individual within a specific group (which may be defined on the basis of any characteristic(s) such as birth year, sex, race, geographic location, occupation, etc.) can expect to live between birth and death. (Life expectancy can also be calculated for persons of a specific age and interpreted as the expected average number of additional years of life--for example, the life expectancy of persons 60 years of age.)

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[4]Deaths of children under one year of age.

Life expectancy is always calculated separately for males and females, as there is a substantial gap between life expectancies of the two sexes in industrialized countries. In Alberta, a female can expect to live 77.36 years compared to male expectancy of 70.39 years (Table 10). These expectancy values vary among the census divisions: C.D. 9 has the lowest values and C.D. 2 has the highest values.

Natural Increase

The rate of natural increase is an index of internal growth of a population (excluding any consideration of net migration), and it is calculated by subtracting the crude death rate from the crude birth rate. Table 1 shows a rate of natural increase in Alberta for 1973 of 11.01 persons per 1,000 population. This can be roughly interpreted as a growth of eleven persons during the year for every 1,000 population. The rate of natural increase varied from a low of 2.24 in C.D. 10 to 16.97 in C.D. 15. Northern Alberta had a substantially higher rate of increase than Southern Alberta (11.38 as compared to 9.00).

In comparison with the other provinces, Alberta's rate of natural increase in 1973 was higher than the Canadian average (8.1), and was exceeded only by Newfoundland and the northern territories (Table 2).

One should be careful not to confuse the rate of natural increase of an area with its actual growth rate, as net migration may be a very substantial component of population change in the area.

MARRIAGES

A total of 16,270 marriages occurred in Alberta in 1973, for a rate of 9.66 marriages per 1,000 population (Table 11).(Crude marriage rates tend to be lower than death or birth rates as only one event, marriage, occurs to two people.) The highest marriage rates were in C.D.'s 3 and 9, and the lowest rates were in C.D.'s 12 and 5. Rates were higher for Edmonton than Calgary, and for southern than northern Alberta. There are several factors which may account for the variation in marriage rates between areas, such as the proportion of the population who are of marriageable age, the area's economic situation, the proportion of the population who are already married, varying provisions for the dissolution of marriage and/or the customs regarding re-marriage.

The age-sex specific marriage rate was highest for the 20-24 year age group for both males and females (Table 12 and Figure 3). Two types of averages were calculated to determine the average age at marriage: mean and median (Table 13 and Figure 4). The mean age at marriage was 26.9 years for males and 24.2 years for females. However, because the distribution of marriages by age is concentrated in the younger age groups, the mean is not an adequate indicator. A better indicator, the median age at marriage, was 23.0 years for males and 20.5 years for females.

DIVORCES

Data on divorces in Alberta are available from the Attorney General's Department.[5] The data are annually submitted to Vital Statistics in Ottawa, where they are included in the official vital statistics publications.

Alberta had 4,435 divorces in 1973 for a crude divorce rate of 263.4 divorces per 100,000 population--second only to the Yukon Territory, and much much higher than the Canadian average of 166.1 (Table 14).

Thirty-five per cent of all divorces occurred in Calgary, and 48.17 per cent in Edmonton.

Almost 90 per cent of divorces occurred to persons during their first marriages; over eight per cent were to persons who had been divorced before (Table 16).

The largest proportion of divorces in Alberta occurred in marriages of 5-9 year duration. The second largest proportion occurred in those of 0-4 year duration (Table 17).

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[5] It was not possible to obtain divorce statistics by place of residence; Table 15 presents a breakdown of the data by court house location.

TABLE 1 CRUDE BIRTH AND DEATH RATES, AND RATES OF NATURAL INCREASE, BY CENSUS DIVISION, ALBERTA, 1973

Census Division	1973 Population[a]	Livebirths		Deaths		Rate of Natural Increase[d]
		#	crude birth rate[b]	#	crude death rate[c]	
1	40,406	599	14.82	313	7.75	7.07
2	89,568	1,516	16.93	617	6.89	10.04
3	31,988	670	20.95	286	8.94	12.01
4	13,468	199	14.78	104	7.72	7.06
5	35,692	519	14.54	300	8.41	6.13
6	462,317	7,843	16.96	2,694	5.83	11.13
7	39,565	677	17.11	335	8.47	8.64
8	88,557	1,379	15.57	670	7.57	8.00
9	20,540	350	17.04	124	6.04	11.00
10	67,849	747	11.01	595	8.77	2.24
11	571,414	10,399	18.20	3,325	5.82	12.38
12	56,569	1,131	19.99	329	5.82	14.17
13	45,289	605	13.36	375	8.28	5.08
14	22,392	412	18.40	118	5.27	13.13
15	97,986	2,226	22.72	563	5.75	16.97
TOTAL ALBERTA	1,683,600	29,272	17.39	10,748	6.38	11.01
Edmonton	441,530	7,628	17.28	2,597	5.88	11.40
Calgary	424,787	7,290	17.16	2,453	5.77	11.39
Northern Alberta[e]	548,091	9,948	18.15	3,713	6.77	11.38
Southern Alberta[f]	269,192	4,406	16.37	1,985	7.37	9.00

Source of data on livebirths and deaths: 1973 Vital Statistics.

[a]Census division populations were derived by prorating the 1973 Vital Statistics estimate for Alberta by the 1971 Census proportional distribution among census divisions. Calgary and Edmonton populations were from Municipal Affairs.

[b]Births per 1000 total population.

[c]Deaths per 1000 total population.

[d]Calculated by subtracting the crude death rate from the crude birth rate.

[e]Census divisions 7, 8, 10-15 (excluding Edmonton city).

[f]Census divisions 1-6, 9 (excluding Calgary city).

TABLE 2 CRUDE BIRTH AND AGE-STANDARDIZED DEATH RATES, AND RATES OF NATURAL INCREASE, CANADA AND THE PROVINCES, 1973.

Province	Crude Birth Rate	Age-Standardized Crude Death Rate[a]	Rate of Natural Increase
Newfoundland	22.0	9.7	12.3
Prince Edward Island	16.4	9.6	6.8
Nova Scotia	16.5	10.3	6.2
New Brunswick	17.5	9.7	7.8
Quebec	13.8	10.6	3.2
Ontario	15.6	9.8	5.8
Manitoba	17.0	8.8	8.2
Saskatchewan	16.3	8.3	8.0
Alberta	17.4	8.6	8.8
British Columbia	14.8	11.9	2.9
Yukon	21.3	10.9	10.4
Northwest Territories	31.9	15.5	16.4
CANADA	15.5	10.3	5.2

Source: 1973 Vital Statistics

[a] Standardized to the 1973 Canadian population

TABLE 3 AGE-SPECIFIC FERTILITY RATES, ALBERTA, 1973

Age Group	1973 Female Population[a]	Number of Livebirths	Age-Specific Birth Rates[b]	Percentage Distribution of Livebirths
15 - 19	83,700	4,235[c]	50.56	14.47
20 - 24	73,500	10,693	145.48	36.53
25 - 29	67,500	9,506	140.83	32.47
30 - 34	53,400	3,476	65.09	11.87
35 - 39	47,300	1,058	22.37	3.61
40 - 44	46,500	269	5.79	0.91
45 - 49	44,000	22[d]	0.50	0.08
Not known	-	13	0.03	0.04
TOTAL	415,900	29,272	70.38	100.00
TOTAL FERTILITY RATE[e]	-	-	2,153.10	-

Source of data on livebirths: 1973 Vital Statistics.

[a]Source of population estimates - Statistics Canada.

[b]Livebirths per 1000 females in that age group.

[c]Includes births to women less than 15 years of age.

[d]Includes births to women more than 49 years of age.

[e]Total fertility rate = 5 (sum of age-specific birth rate). It can be interpretated as the total number of children that would ever be born to a hypothetical group of 1000 women if the group exhibited the above birth rates at each year of age as they passed through the reproductive span of life.

TABLE 4 MASCULINITY SEX RATIO AT BIRTH, BY CENSUS DIVISION, ALBERTA, 1973

Census Divisions	Livebirths		Masculinity Sex Ratio[a]
	Males	Females	
1	308	291	105.84
2	787	729	107.96
3	351	319	110.03
4	109	90	121.11
5	267	252	105.95
6	3,922	3,921	100.03
7	351	326	107.67
8	726	653	111.18
9	186	164	113.41
10	382	365	104.66
11	5,470	4,929	110.98
12	604	527	114.61
13	285	320	89.06
14	209	203	102.96
15	1,082	1,144	94.58
TOTAL	15,039	14,233	105.66
Edmonton	4,044	3,584	112.83
Calgary	3,661	3,629	100.88

Source of livebirth date: 1973 Vital Statistics.

[a]Number of male births per 100 female births.

TABLE 5 MULTIPLE BIRTHS, ALBERTA, 1973

Type	Livebirths	
	#	%
Single	28,748	98.21
Twins	512	1.75
Triplets	-	-
1 Twin/1Stillborn	12	0.04
TOTAL	29,272	100.00

Source: 1973 Vital Statistics

TABLE 6 LEGITIMATE AND ILLEGITIMATE BIRTHS, BY CENSUS DIVISION, ALBERTA, 1973*

Census Divisions	Number of Livebirths	Legitimate Births #	Legitimate Births %	Illegitimate Births #	Illegitimate Births %
1	599	564	94.2	35	5.8
2	1,516	1,417	93.5	99	6.5
3	670	525	78.4	145	21.6
4	199	191	96.0	8	4.0
5	519	451	86.9	68	13.1
6	7,843	7,152	91.2	691	8.8
7	677	633	93.5	44	6.5
8	1,379	1,205	87.4	174	12.6
9	350	272	77.7	78	22.3
10	747	696	93.2	51	6.8
11	10,399	9,206	88.5	1,193	11.5
12	1,131	877	77.5	254	22.5
13	605	535	88.4	70	11.6
14	412	364	88.4	48	11.6
15	2,226	1,859	83.5	367	16.5
TOTAL	29,272	25,947	88.6	3,325	11.4
Edmonton	7,628	6,606	86.6	1,022	13.4
Calgary	7,290	6,649	91.2	641	8.8
Northern Alberta[a]	7,177	6,169	86.0	1,008	14.0
Southern Alberta[b]	3,853	3,420	88.8	433	11.2

Source of Livebirth data: 1973 Vital Statistics.

*Illegitimacy in Alberta is defined as a livebirth where the parents are not married.

[a]Census divisions 7, 8, 10-15 (excluding Edmonton).

[b]Census divisions 1-6, 9 (excluding Calgary).

TABLE 7 DEATHS BY SEX, BY CENSUS DIVISION, ALBERTA 1973

Census Division	Male		Female		Both Sexes	
	#	%	#	%	#	%
1	201	64.2	112	35.8	313	100.0
2	399	64.7	218	35.3	617	100.0
3	163	57.0	123	43.0	286	100.0
4	73	70.2	31	29.8	104	100.0
5	184	61.3	116	38.7	300	100.0
6	1,587	58.9	1,107	41.1	2,694	100.0
7	212	63.3	123	36.7	335	100.0
8	388	57.9	282	42.1	670	100.0
9	84	67.7	40	22.3	124	100.0
10	372	62.5	223	37.5	595	100.0
11	2,024	60.9	1,301	39.1	3,325	100.0
12	221	67.2	108	32.8	329	100.0
13	228	60.8	147	39.2	375	100.0
14	82	69.5	36	30.5	118	100.0
15	401	71.2	162	28.8	563	100.0
TOTAL	6,619	61.6	4,129	38.4	10,748	100.0
Edmonton	1,566	60.3	1,031	39.7	2,597	100.0
Calgary	1,426	58.1	1,027	41.9	2,453	100.0
Northern Alberta[a]	2,362	63.6	1,351	36.4	3,713	100.0
Southern Alberta[b]	1,265	63.7	720	36.3	1,985	100.0

Source of deaths data: 1973 Vital Statistics.

[a]Census divisions 7, 8, 10-15 (excluding Edmonton).

[b]Census divisions 1-6, 9 (excluding Calgary).

TABLE 8 AGE-SEX SPECIFIC MORTALITY RATES, ALBERTA, 1973

Age	MALES 1973 Population[a]	# of Deaths	Age-Specific Mortality Rates[b]	FEMALES 1973 Population[a]	#of Deaths	Age-Sex Specific Mortality Rates[b]
0-4	77,000	303	3,94	73,000	223	3.05
5-9	85,700	35	0.41	82,100	28	0.34
10-14	96,400	57	0.59	92.500	33	0.36
15-19	88,200	173	1.96	83,700	63	0.75
20-24	73,100	160	2.19	73,500	38	0.52
25-29	67.300	98	1.46	67.500	46	0.68
30-34	55,200	96	1.74	53,400	39	0.73
35-39	50,800	116	2.28	47,300	55	1.16
40-44	51,000	180	3.53	46,500	71	1.53
45-49	46,100	238	5.16	44,000	122	2.77
50-54	40,400	316	7.82	40,600	177	4.36
55-59	34,000	423	12.44	33,800	210	6.21
60-64	27,700	542	19.57	27,300	270	9.89
65-69	22,800	648	28.42	22,100	320	14.48
70-74	16,500	760	46.06	16,100	377	32.50
75-79	10,400	738	70.96	11,600	547	47.16
80-84	7,000	751	107.29	7,900	623	78.86
85+	5,000	985	197.00	6,100	887	145.41
TOTAL	854,600	6,619	7.75	829,000	4,129	4.98

Source of deaths data: 1973 Vital Statistics

[a]Source: Statistics Canada estimates.

[b]Deaths per 1000 population within that age-sex group.

TABLE 9 INFANT MORTALITY, BY CENSUS DIVISION, ALBERTA, 1973

Census Division	Males			Females			Both Sexes
	Live-births	Infant Deaths[a]	Mortality Rate[b]	Live-births	Infant Deaths[a]	Mortality Rate[b]	Mortality Rate[b]
1	308	4	12.99	291	2	6.87	10.02
2	787	13	16.52	729	11	15.09	16.95
3	351	4	11.40	319	9	28.21	19.40
4	109	3	27.52	90	1	11.11	20.10
5	267	4	14.98	252	3	11.90	13.49
6	3,922	54	13.77	3,921	39	9.95	11.85
7	351	6	17.09	326	8	24.54	20.68
8	726	14	19.28	653	8	12.25	15.95
9	186	7	38.25	164	-	-	20.00
10	382	8	20.94	365	3	8.22	14.73
11	5,470	89	16.27	4,929	69	14.00	15.19
12	604	11	18.21	527	5	9.49	14.15
13	285	5	17.54	320	3	9.38	13.22
14	209	4	19.14	203	3	14.78	16.99
15	1,082	20	18.48	1,144	13	11.36	14.82
TOTAL	15,039	246	16.36	14,233	177	12.44	14.45
Edmonton	4,044	66	16.32	3,584	51	14.23	15.34
Calgary	3,361	52	14.20	3,629	37	10.20	12.73

Data source: 1973 Vital Statistics.

[a] Deaths of children under one year of age.

[b] Infant deaths per 1000 livebirths.

TABLE 10 AVERAGE LIFE EXPECTANCY AT BIRTH BY CENSUS DIVISIONS, ALBERTA, 1970 - 1972*

Census Division	Average Life Expectancy at Birth	
	Male	Female
1	70.62	77.45
2	71.53	79.74
3	68.70	75.37
4	70.30	77.55
5	70.14	77.27
6	70.87	77.36
7	70.62	77.04
8	69.00	77.78
9	67.97	74.59
10	70.55	78.05
11	70.57	77.98
12	68.53	75.37
13	69.56	78.65
14	69.24	83.35[a]
15	70.25	76.45
TOTAL	70.39	77.56

Data Source: 1973 Vital Statistics.
*Average life expectancies were based on the Alberta mortality experience of 1970-72; using the Barclay methodology for life table construction.
[a]For some age groups no deaths were reported during 1970 - 72.

TABLE 11 MARRIAGE RATES FOR CENSUS DIVISIONS, ALBERTA, 1973

Census Division	1973 Population[a]	Number of Marriages	Marriage Rate[b]
1	40,406	407	10.07
2	89,568	932	10.41
3	31,988	480	15.01
4	13,468	112	8.32
5	35,692	215	6.02
6	462,317	4,723	10.22
7	39,565	301	7.61
8	88,557	850	9.60
9	20,540	295	14.36
10	67,849	545	8.03
11	571,414	5,779	10.11
12	56,569	327	5.78
13	45,289	327	7.22
14	22,392	163	7.28
15	97,986	814	8.31
TOTAL ALBERTA	1,683,600	16,270	9.66
Edmonton	441,530	4,941	11.19
Calgary	424,787	4,423	10.41
Northern Alberta[c]	548,091	4,165	7.60
Southern Alberta[d]	269,192	2,741	10.18

Data Source: 1973 Vital Statistics

[a]For source of population data, refer to footnote "a" on Table 1.

[b]Marriages per 1000 total population.

[c]Census divisions 7, 8, 10-15 (excluding Edmonton).

[d]Census divisions 1-6, 9 (excluding Calgary).

TABLE 12 AGE-SEX SPECIFIC MARRIAGE RATES, ALBERTA, 1973

Age	MALES 1973 Population[a]	MALES # of Marriages	MALES Age-Sex Specific Marriage Rate[b]	FEMALES 1973 Population	FEMALES # of Marriages	FEMALES Age-Sex Specifi Marriage Rate
15-19	88,200	1,668[c]	18.91	83,700	5,358[c]	64.01
20-24	73,100	7,786	106.51	73,500	6,630	90.20
25-29	67,300	3,281	48.75	67,500	1,859	27.54
30-34	55,200	1,170	21.20	53,400	736	13.78
35-39	50,800	690	13.58	47,300	422	8.92
40-44	51,000	508	9.96	46,500	349	7.51
45-49	46,100	352	7.64	44,000	276	6.27
50-54	40,400	248	6.14	40,600	231	5.69
55-59	34,000	195	5.74	33,800	161	4.76
60-64	27,700	134	4.84	27,300	115	4.21
65-69	22,800	114	5.00	22,100	80	3.62
70-74	16,500	64	3.88	16,100	34	2.11
75+	22,400	60	2.68	25,600	19	0.74
TOTAL	595,500	16,270	27.32[d]	581,400	16,270	27.98[d]

Data Source: 1973 Vital Statistics.

[a]Source of population estimates: Statistics Canada.

[b]Marriages per 1000 population within that age-sex group.

[c]Includes marriages occurring to persons under 15 years of age.

[d]General Marriage Rate = $\frac{\text{marriages}}{\text{Population 15+}}$ X 1000

TABLE 13 DISTRIBUTION OF AGE AT MARRIAGE, ALBERTA, 1973

Age	Brides		Bridegrooms	
	#	%	#	%
14-19 (female) 16-19 (male)	5,358	32.93	1,668	10.75
20-24	6,630	40.75	7,786	47.85
25-29	1,859	11.43	3,281	20.17
30-34	736	4.52	1,170	7.19
35-39	422	2.59	690	4.24
40-44	349	2.15	508	3.12
45-49	276	1.70	352	2.16
50-54	231	1.42	248	1.52
55-59	161	0.99	195	1.21
60-64	115	0.71	134	0.82
65-69	80	0.49	114	0.71
70-74	34	0.20	64	0.39
75+	19	0.12	60	0.37
TOTAL	16,270	100.00	16,270	100.00
Mean age	24.2	-	26.9	-
Median age	20.5	-	23.0	-

Data Source: 1973 Vital Statistics.

TABLE 14 CRUDE DIVORCE RATES FOR CANADA AND THE PROVINCES, 1973

Provinces	Crude Divorce Rate [a]	Rank
Newfoundland	41.4	12
Prince Edward Island	47.0	11
Nova Scotia	155.2	6
New Brunswick	88.1	10
Quebec	133.0	7
Ontario	173.6	4
Manitoba	162.4	5
Saskatchewan	97.7	9
Alberta	263.4	2
British Columbia	245.7	3
Yukon	304.6	1
North West Territories	111.1	8
CANADA	166.1	-

Source: 1973 Vital Statistics.

[a]Divorces per 100,000 population.

TABLE 15 DIVORCES BY COURTHOUSE LOCATION, ALBERTA, 1973

Court House Location	Divorces[a] #	%
Calgary	1560	35.53
Drumheller	25	0.57
Edmonton	2115	48.17
Fort McLeod	30	0.68
Grande Prairie	65	1.48
Hanna	3	0.07
Lethbridge	206	4.69
Medicine Hat	110	2.51
Peace River	41	0.93
Red Deer	170	3.87
Vegreville	12	0.27
Wetaskiwin	54	1.23
TOTAL	4391	100.00

Source: Attorney General's department, unpublished court statistics.

[a]Decrees absolute.

TABLE 16 DIVORCES BY MARITAL STATUS AT TIME OF MARRIAGE, ALBERTA, 1973*

Marital Status at Time of Marriage	Males		Females	
	#	%	#	%
Single	3,989	89.94	3,946	88.97
Widowed	68	1.53	112	2.53
Divorced	375	8.46	376	8.50
Not Stated	3	0.07	1	-
TOTAL ALBERTA	4,435	100.00	4,435	100.00

Source: Statistics Canada
*Statistics are based on the number of divorce actions commenced during 1973, and therefore are somewhat higher than the decrees absolute figure given in Table 15.

TABLE 17 DIVORCES BY DURATION OF MARRIAGE, ALBERTA, 1973*

Duration in Years	# of Divorces	% of all Divorces
< 1	44	0.99
1	162	3.65
2	238	5.37
3	312	7.03
4	290	6.54
SUBTOTAL 1-4	1,002	22.59
5	318	7.17
6	262	5.91
7	261	5.89
8	227	5.12
9	182	4.10
SUBTOTAL 5-9	1,250	28.18
10-14	728	16.41
15-19	552	12.45
20-24	362	8.16
25-29	271	6.11
30+	226	5.10
TOTAL ALBERTA	4,435	100.00

Source: Statistics Canada.

*Statistics are based on the number of divorce actions commenced during 1973, and therefore are somewhat higher than the decrees absolute given in Table 15.

APPENDIX: VITAL STATISTICS COMPUTERIZED DATA BASES

BIRTHS

Registration Number

Information on the child

- Name
- Social Insurance Number
- Sex
- Weight

Date of Birth

Place of Birth

- Alphabetic place name
- 5-digit Geocode
- Type of Institution

Information on the parents

- Names
- Birthplaces in 2-digit province-country codes
- Ages
- Social Insurance Numbers
- Whether the parents are married to each other
- Marital Status of the mother
- Usual residence of the mother
  - 2-digit province-country code
  - If in Alberta
    - Census Division code
    - Locality code

Medical Statistics

- Whether it was a multiple birth
  - if so
    - Number of fetuses
      - Number liveborn
      - Number Stillborn
    - Birth order
- Duration of pregnancy in weeks
- Number of children liveborn to mother
- Number of children stillborn to mother
- Type of attendant, i.e. doctor, nurse, etc.

Date of Certification

MARRIAGES

Registration Number

Date of Marriage

Place of Marriage

- Alphabetic place name
- 5-digit Geocode

The following data is available for both the bride and the groom:

- Name
- Birthplace in 2-digit province-country code
- Date of Birth
- Social Insurance Number
- Age
- Marital Status
- Religion
- Name of father
- Father's birthplace in 2-digit code
- Name of mother
- Mother's birthplace in 2-digit code
- Usual residence
  - 2-digit province-country code
  - If in Alberta
    - Census Division code
    - Locality code

Officiant

- Whether it was a clergyman or a marriage commissioner
- It it was a clergyman, his religion

Certification Date

DEATHS

Registration Number

Information on the Deceased

- Name
- Sex
- Social Insurance Number
- Date of Birth
- Birthplace in 2-digit province-country code
- Name of father
- Birthplace of mother in 2-digit code
- Age
- Usual residence
  - 2-digit province-country code
  - If in Alberta
    - Census division code
    - Locality code
- Marital status

Date of Death

Place of Death

- Alphabetic place name
- 5-digit Geocode
- Whether it was a hospital, nursing home, etc.

Name of Spouse

Medical Statistics

- Cause of death (ICDA code)
- If injury
  - nature of injury (ICDA code)
  - place of injury code e.g. home, farm, street, etc.
- Autopsy
  - Whether one was held
  - Whether the findings affected the reason for cause of death
  - Will further information be available later?
- Attendant, i.e. doctor, nurse, etc.
- Disposition of the body, i.e. buried, cremated, etc.

Certification Date

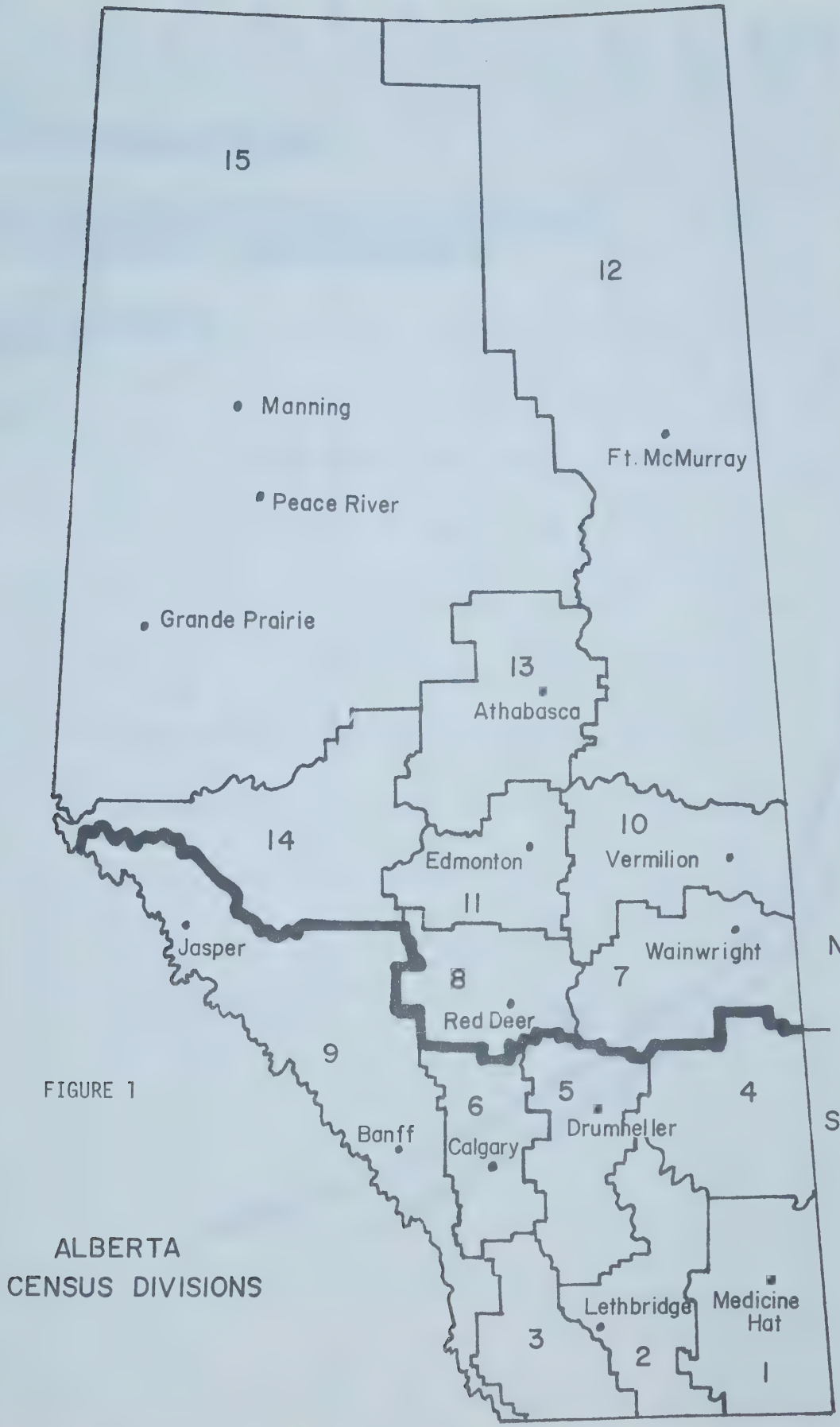


FIGURE 1

ALBERTA
CENSUS DIVISIONS

FIGURE 2 AGE-SEX SPECIFIC MORTALITY RATES, ALBERTA 1973

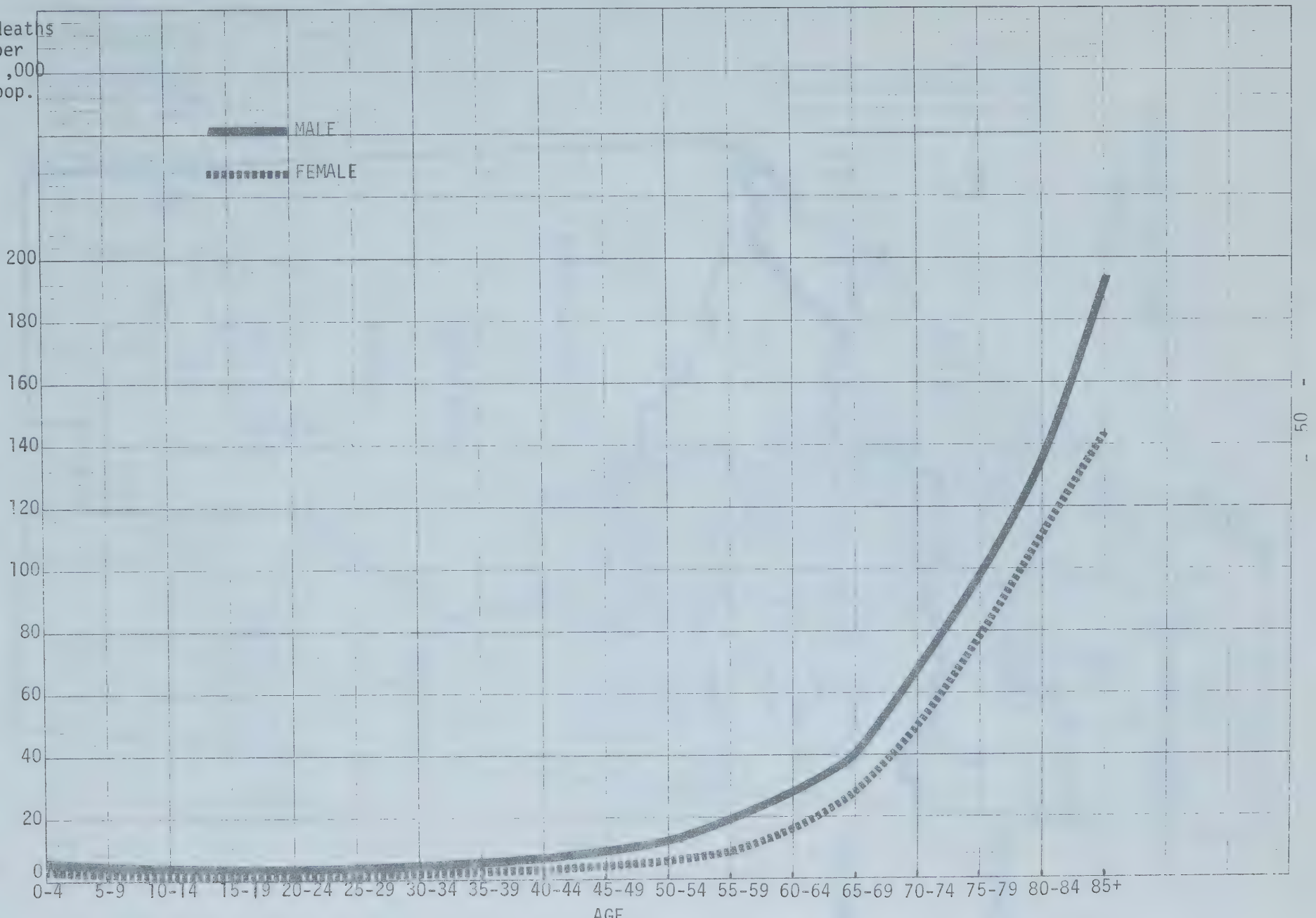


FIGURE 3 AGE-SEX SPECIFIC MARRIAGE RATES, ALBERTA 1973

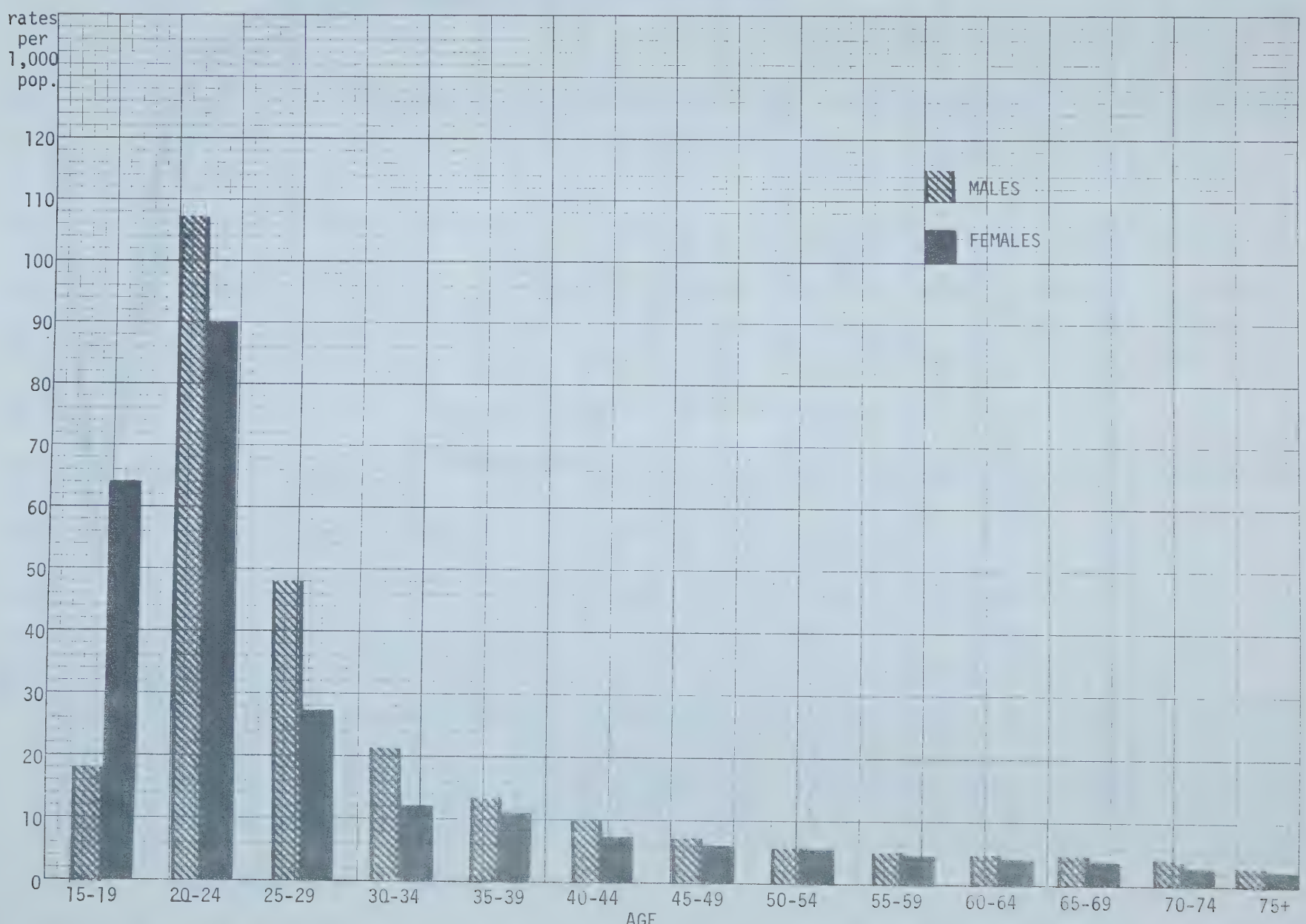
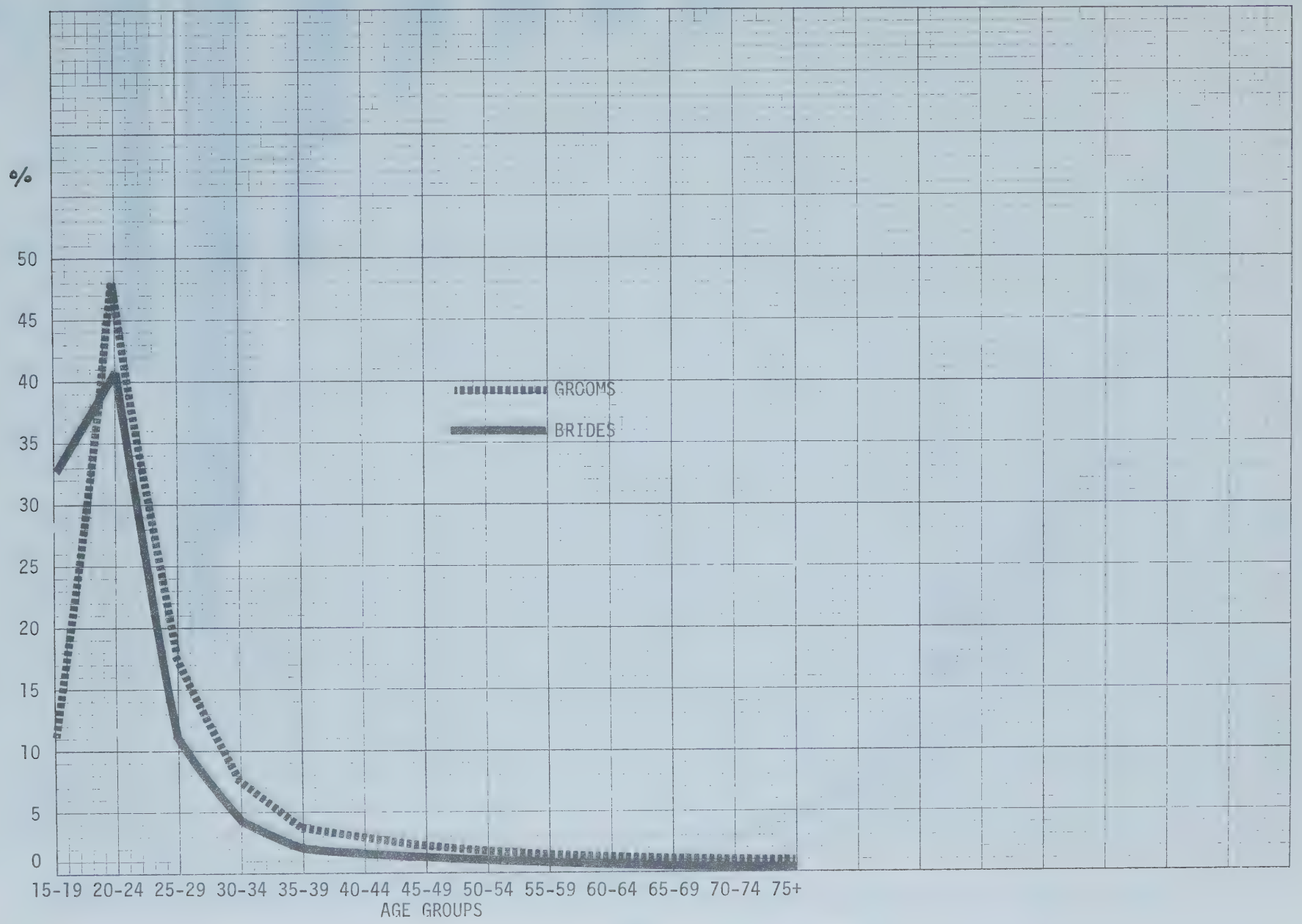


FIGURE 4 DISTRIBUTION OF AGE AT MARRIAGE, ALBERTA 1973



HIGHLIGHTS OF PUBLIC ASSISTANCE

Delaine McVey and Cathy Reynolds*

Table 1 presents the distribution of the public assistance caseload by reason for assistance for the quarter July-September 1975, compared to the previous quarter. Total caseload increased 1.6 per cent from an average 31,190 in the April-June quarter to 31,687 in this quarter. Ranking of the various reasons for assistance remained unchanged, with persons with dependent children accounting for the largest proportion of the caseload (38.5 per cent). Persons 60 years of age or older constituted 20.4 per cent of the total caseload and persons receiving assistance due to physical ill health or disability comprised 18.4 per cent. These three reasons for assistance together accounted for 77.3 per cent of the total caseload.

Employable cases declined 2.4 per cent from the April-June quarter. Age caseload dropped 2.1 per cent, following the implementation in July of the Alberta Assured Income Plan which applies to persons 65 years of age and older receiving Old Age Security/Guaranteed Income Supplement. Mental ill health cases declined 0.1 per cent; however, mental retardation caseload increased 8.6 per cent. The number of persons with dependent children increased by 4.6 per cent. Persons unsuited for employment increased 14.9 per cent this quarter. The increase in this last reason for assistance is largely due to cases transferred from other reasons for assistance.

Table 2 indicates the age-sex distribution of the caseload for the July-September 1975 quarter. The percentage of the total caseload comprised of males declined to 35.3 per cent this quarter. Males decreased 0.5 per cent in numbers to 11,176; female caseload increased 2.8 per cent to 20,511. The largest components of the male caseload are those aged 60-64 and 65+, constituting 28.2 per cent of all males and 10.0 per cent of the total caseload. The largest components of the female caseload are those 20-24 and 25-29, comprising 27.7 per cent of all females and 17.9 per cent of the total caseload.

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* Delaine McVey is a research assistant with Research and Planning; Cathy Reynolds is a statistical clerk.

Table 3 indicates the distribution of public assistance cases among the 37 regional offices. Edmonton and Calgary regional offices accounted for 64.7 per cent of the total provincial caseload this quarter. Although the Calgary South regional office experienced a decrease, caseload increased for total Calgary by 1.1 per cent. The total Edmonton caseload increased by 3.3 per cent. The largest percentage increases were those for Red Deer (7.3 per cent), Brooks (6.9 per cent), and Slave Lake (6.8 per cent). Sixteen regional offices had caseload decreases this quarter, the largest of which were Fort McMurray's 8.8 per cent, Grande Cache's 8.2 per cent,[1] and High Level's 8.5 per cent.

The distribution of average caseload by employment status and reason for assistance is presented in Table 4 for the July-September quarter. Persons categorized as in the labour force and on assistance increased 0.9 per cent to 7,909, while the number of persons not in the labour force increased 2.1 per cent to 23,611. In summary, all major categories of employment status increased except "persons available for full-time work" which declined 1.2 per cent to 2,687. Persons employed and awaiting pay increased 26.6 per cent to 894. Persons with dependent children working part-time increased 5.5 per cent to 632; those fully employed also increased from 526 to 595 this quarter. Persons required to care for children increased 5.2 per cent; persons with illness of 90 days or more increased 1.8 per cent this quarter to 6061.

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[1] Grande Cache's decrease follows a 49.0 per cent increase for the previous quarter. Part of the extreme percentage changes in this regional office's caseload is the statistical effect of minor changes to a small caseload base.

TABLE 1 DISTRIBUTION OF CASELOAD BY REASON FOR ASSISTANCE, ALBERTA, JULY-SEPTEMBER 1975

Reason for Assistance	Quarterly Average April-June 1975		July	August	September	Quarterly Average July-September 1975		Percentage Change Between Quarters
	#	%	#	#	#	#	%	%
Age 60+	6600	21.16	6650	6401	6332	6461	20.39	-2.11
Physical Ill Health/Disability	5748	18.43	5762	5837	5894	5831	18.40	1.44
Mental Ill Health	2048	6.57	2036	2042	2059	2046	6.46	-0.10
Mental Retardation	544	1.74	573	594	606	591	1.87	8.64
Unsuited for Employment	462	1.48	505	537	552	531	1.67	14.94
Person with Dependent Children	11652	37.36	11936	12271	12366	12191	38.47	4.63
Employable	4136	13.26	3915	4035	4158	4036	12.74	-2.42
TOTAL	31190	100.00	31377	31717	31967	31687	100.00	1.59
Increase Rate over Previous Month			0.83	1.08	0.79			
Increase Rate over Previous Quarter	2.09					1.59		

TABLE 2 AGE-SEX DISTRIBUTION OF CASELOAD
ALBERTA, JULY-SEPTEMBER 1975

Age Group	Males		Females		Both Sexes	
	#	%	#	%	#	%
15 - 19	585	1.85	1559	4.92	2144	6.77
20 - 24	1160	3.66	2906	9.17	4066	12.83
25 - 29	1036	3.27	2765	8.73	3801	12.00
30 - 34	839	2.65	2183	6.89	3022	9.54
35 - 39	739	2.33	1861	5.87	2600	8.20
40 - 44	832	2.62	1637	5.17	2469	7.79
45 - 49	940	2.97	1424	4.49	2364	7.46
50 - 54	853	2.69	1425	4.50	2278	7.19
55 - 59	1039	3.28	1444	4.56	2483	7.84
60 - 64	1643	5.18	1924	6.07	3567	11.25
65 +	1510	4.77	1383	4.36	2893	9.13
TOTAL	11176	35.27	20511	64.73	31687	100.00

TABLE 3 REGIONAL DISTRIBUTION AND CHANGE IN CASELOAD, ALBERTA, JULY - SEPTEMBER 1975*

Regional Office	Quarterly Average April - June 1975		Quarterly Average July - September 1975		Rate of Change over Last Quarter	Rank Order	
	#	%	#	%	%	Last Quarter	This Quarter
Edmonton North	5128	16.44	5374	16.96	4.80	1	1
Calgary South	3344	10.72	3311	10.45	-0.99	2	2
Calgary South West	2661	8.53	2771	8.74	4.13	3	3
Calgary North	2548	8.17	2561	8.08	0.51	4	4
Edmonton West	2495	8.00	2511	7.93	0.64	5	5
Edmonton South	2203	7.07	2299	7.26	4.36	6	6
Edmonton West 10	1643	5.27	1658	5.23	0.91	7	7
Lethbridge	1620	5.19	1598	5.04	-1.36	8	8
Grande Prairie	1041	3.34	1040	3.28	-0.10	9	9
Red Deer	827	2.65	887	2.80	7.26	10	10
Wetaskiwin	733	2.35	752	2.37	2.59	11	11
Medicine Hat	588	1.89	561	1.77	-4.59	12	12
High Prairie	490	1.57	498	1.57	1.63	13	13
Lac La Biche	430	1.38	426	1.34	-0.93	14	14
Barrhead	397	1.27	408	1.29	2.77	15	15
Slave Lake	367	1.18	392	1.24	6.81	16	16
Peace River	352	1.13	364	1.15	3.41	18	17
Vegreville	365	1.17	363	1.15	-0.55	17	18
Edson	331	1.06	332	1.05	0.30	19	19
St. Paul	319	1.02	320	1.01	0.31	20	20
Drumheller	298	0.95	297	0.94	-0.34	22	21
Bonnyville	312	1.00	296	0.93	-5.13	21	22
Vermilion	267	0.86	269	0.85	0.75	23	23
Camrose	252	0.81	255	0.80	1.19	24	24
Smoky Lake	250	0.80	254	0.80	1.60	25	25
Athabasca	209	0.67	220	0.69	5.26	27	26
Blairmore	218	0.70	212	0.67	-2.75	26	27
Wainwright	186	0.60	190	0.60	2.15	30	28
High Level	200	0.64	183	0.58	-8.50	28	29
Fort McMurray	194	0.62	177	0.56	-8.76	29	30
Whitecourt	163	0.52	162	0.51	-0.61	32	31
Olds	156	0.50	158	0.50	1.28	34	32
Stettler	161	0.52	157	0.50	-2.48	33	34
Rocky Mtn. House	166	0.53	157	0.50	-5.42	31	34
Brooks	130	0.42	139	0.44	6.92	35	35
Hanna	73	0.23	68	0.21	-6.85	37	36
Grande Cache	73	0.23	67	0.21	-8.22	37	37
TOTAL	31190	100.00	31687	100.00	1.59		

*For comparability to Tables 1 and 2, Guardian Social Allowance cases have been excluded. This table indicates the net social allowance and health/medical caseload.

TABLE 4 SOCIAL ALLOWANCE CASES BY EMPLOYMENT STATUS AND REASON FOR ASSISTANCE
Averages for July - September 1975

	REASON FOR ASSISTANCE															
	Aged		Persons with Dependent Children		Physical Illness or Disability		Mental Illness		Mental Retardation		Employable		Unsuitable for Employment		Total	
Employment Status	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
IN THE LABOUR FORCE																
Employed or in Training:																
Employed and awaiting pay	3	0.05	106	0.87	9	0.16	5	0.25	2	0.34	769	19.23			894	2.84
Fully employed	18	0.28	595	4.90	32	0.55	41	2.03	23	3.90	337	8.43			1046	3.32
Part-time - not seeking full-time	141	2.19	632	5.21	155	2.67	217	10.72	53	8.98	133	3.32			1331	4.22
Self-employment	37	0.57	18	0.15	35	0.60	4	0.20	-	-	87	2.17			181	0.57
Attending school up to and including Grade 12	-	-	104	0.86	18	0.31	10	0.49	8	1.36	289	7.23			429	1.36
Attending technical or vocation training	1	0.02	316	2.60	35	0.60	7	0.34	-	-	91	2.27			450	1.43
Attending post secondary education	-	-	99	0.82	8	0.14	1	0.05	-	-	7	0.17			115	0.36
SUBTOTAL	200	3.11	1870	15.41	292	5.03	285	14.08	86	14.58	1713	42.82			4446	14.10
Available for Work:																
Available for full-time work	31	0.48	535	4.41	53	0.91	23	1.14	3	0.51	2042	51.06			2687	8.53
Available for part-time work	12	0.19	171	1.41	27	0.46	4	0.20	2	0.34	44	1.10			260	0.87
Available for sheltered work	-	-	5	0.04	50	0.86	88	4.35	72	12.20	-	-			215	0.68
Working part-time; seeking or encouraged to seek full-time	4	0.06	134	1.11	16	0.28	7	0.34	1	0.17	139	3.47			301	0.96
SUBTOTAL	47	0.73	845	6.97	146	2.51	122	6.03	78	13.22	2225	55.63			3463	10.99
TOTAL IN THE LABOUR FORCE	247	3.84	2715	22.38	438	7.54	407	20.11	164	27.80	3938	98.45			7909	25.09
NOT IN THE LABOUR FORCE																
Unavailable for Work Due to Illness or Age:																
Illness up to 90 days	26	0.40	70	0.58	762	13.12	100	4.94	2	0.34					960	3.04
Illness 90 days or over	614	9.54	227	1.87	3970	68.37	1007	49.75	244	41.35					6061	19.23
Age	5326	82.77	-	-	-	-	-	-	-	-					5326	16.90
SUBTOTAL	5966	92.71	297	2.45	4732	81.49	1107	54.69	246	41.69					12348	39.17
Unavailable to Work Due to Other Reasons:																
Required to care for children	48	0.74	9035	74.47	-	-	-	-	-	-	-	-			9083	28.82
Expecting a child	3	0.05	30	0.24	215	3.70	1	0.05	1	0.17	51	1.28			301	0.96
In jail less than 90 days	-	-	-	-	-	-	-	-	-	-	11	0.27			11	0.03
SUBTOTAL	51	0.79	9065	74.71	215	3.70	1	0.05	1	0.17	62	1.55			9395	29.81
Unsuitable for Employment	171	2.66	56	0.46	422	7.27	509	25.15	179	30.34	-	-	531	100.00	1868	5.93
TOTAL NOT IN THE LABOUR FORCE	6137	95.16	9476	77.62	5369	92.46	1617	79.89	426	72.20	62	1.55	531	100.00	23611	74.91
TOTAL	6453	100.00	12191	100.00	5807	100.00	2024	100.00	590	100.00	4000	100.00	531	100.00	31520	100.00
Missing data	26		58		24		22		1		36		0		167	
Total Caseload	6461		12191		5831		2046		591		4036		531		31687	

HIGHLIGHTS OF CHILD WELFARE STATISTICS

Janice Runyan*

This article describes the distribution of the child welfare caseload during the July to September, 1975 quarter. Table 1 displays the active caseload at the end of each of the months during the quarter, while the other tables present the active caseload at the end of the quarter.

Table 1 shows the distribution of the child welfare caseload by type of case. There were an average of 7,927 cases per month during this quarter. Temporary and permanent Child Welfare Act (C.W.A.) wards each represented approximately one-quarter of the caseload (24 per cent). Children placed with a view to adoption (V.T.A.) comprised seven per cent of the caseload; temporary wards under the Juvenile Delinquency Act (J.D.A.), six per cent; and out of province wards, two per cent. Among non wards, Handicapped Childrens' Services cases were predominant, with 19 per cent of the total caseload; followed by probation cases, 13 per cent; and Custody by Agreement cases (C.B.A.), six per cent.

Table 2 shows the age and sex of the child welfare caseload. Fifty nine per cent of the children were male and 41 per cent were female. The age distribution of the males was older than that of the females. Only thirty-nine per cent of male children were age 10 or younger as compared to 47 per cent for female children. The average ages for male and female children were 10.8 and 10.1 years respectively.

Table 3 displays the distribution of case types by type of placement. Most frequently, children were placed in foster homes (38 per cent) or were living with their parents (24 per cent), followed by placement with a view to adoption (seven per cent). Temporary and permanent C.W.A. wards as well as out-of-province wards utilized foster homes to the greatest extent (62-75 per cent). C.B.A., temporary J.D.A. wards, probation, and H.C.S. cases were most often living with their parents.

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*Janice Runyan is a research assistant with Research and Planning Branch.

For the first time in this series of Child Welfare highlights articles, information on the caseload of each regional office is available (Table 4). The office with the highest proportion of the total caseload was Edmonton West (12.0 per cent), followed by Edmonton North (11.4 per cent), and Calgary North (10.5 per cent). Altogether Edmonton offices accounted for 30 per cent of the caseload and Calgary, 28 per cent.

TABLE 1 DISTRIBUTION OF CASE TYPES IN CHILD WELFARE CASELOAD, ALBERTA

JULY - SEPTEMBER, 1975

Type of Case	July		August		September		Quarterly Average	
	#	%	#	%	#	%	#	%
Wards:								
Temporary Ward C.W.A.	1832	23.4	1832	23.4	1908	23.5	1857	23.4
Permanent Ward C.W.A.	1932	24.7	1874	23.9	1872	23.0	1893	23.9
View to Adoption	501	6.4	559	7.2	591	7.3	550	6.9
Temporary Ward J.D.A.	469	6.0	469	6.0	490	6.0	476	6.0
Out of Province Ward	147	1.9	147	1.9	150	1.9	148	1.9
Wards Subtotal	4881	62.4	4881	62.4	5011	61.7	4924	62.1
Non-Wards:								
Custody by Agreement	480	6.1	480	6.1	506	6.2	489	6.2
Handicapped Children's Services	1442	18.4	1442	18.4	1527	18.8	1470	18.5
Probation	1025	13.1	1025	13.1	1081	13.3	1044	13.2
Non-Wards Subtotal	2946	37.6	2946	37.6	3114	38.3	3002	37.9
CASELOAD TOTAL	7828	100.0	7828	100.0	8127	100.0	7927	100.0

C.W.A. - Child Welfare Act
J.D.A. - Juvenile Delinquency Act

TABLE 2 AGE AND SEX OF CHILD WELFARE CASELOAD, ALBERTA, JULY - SEPTEMBER, 1975

Age	Male		Female		Both Sexes	
	#	%	#	%	#	%
0	179	3.7	166	5.0	345	4.2
1	216	4.5	223	6.8	439	5.4
2	123	2.5	127	3.8	250	3.1
3	145	3.0	111	3.4	256	3.1
4	127	2.6	115	3.5	242	3.0
5	172	3.6	138	4.2	310	3.8
6	163	3.4	129	3.9	292	3.6
7	162	3.3	111	3.4	273	3.4
8	183	3.8	114	3.5	297	3.7
9	210	4.4	156	4.7	366	4.5
10	220	4.6	141	4.3	361	4.4
11	236	4.9	144	4.4	380	4.7
12	290	6.0	166	5.0	456	5.6
13	323	6.7	188	5.7	511	6.3
14	486	10.1	244	7.4	730	9.0
15	600	12.4	298	9.0	898	11.1
16	640	13.3	338	10.2	978	12.0
Over 17	350	7.2	391	11.8	741	9.1
Not known	1	0.0	1	0.0	2	0.0
TOTAL	4826	100.0	3301	100.0	8127	100.0
Percentage Distribution by Sex		59.4		40.6		100.0
Average Age		10.8		10.1		10.5

TABLE 3 DISTRIBUTION OF CASE TYPES BY TYPE OF PLACEMENT, ALBERTA, JULY - SEPTEMBER, 1975

Type of Placement	Temporary Ward (CWA)		Permanent Ward (CWA)		View to Adoption		Temporary Ward (JDA)		Out of Province Ward		Custody by Agreement		Handicapped Children's Services		Probation		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Foster Home[a]	1189	62.3	1409	75.3	42	7.1	61	12.5	112	74.7	167	33.0	73	4.8	18	1.6	3071	37.8
Group Home	36	1.9	34	1.8			34	6.9	1	0.7	27	5.3	6	0.4	3	0.3	141	1.7
Institution:																		
Correctional	--		5	0.3	--		3	0.6	--		--		--		2	0.2	10	0.1
Receiving	76	4.0	69	3.7	6	1.0	19	3.9	2	1.3	48	9.5	32	2.1	10	0.9	262	3.2
Treatment or Detention	79	4.1	44	2.3	--		137	28.0	3	2.0	47	9.3	48	3.1	19	1.8	377	4.7
For Mentally Retarded	13	0.7	72	3.8			3	0.6	2	1.3	8	1.6	343	22.4	1	0.1	442	5.5
Other	10	0.5	35	1.9	2	0.3	3	0.6			10	1.9	49	3.2	4	0.4	113	1.4
View to Adoption																		
in Alberta	--		3	0.2	534	90.4	--		9	6.0	--		--		--		546	6.7
outside Alberta	--		9	0.5	1	0.2	--		--		--		--		--		10	0.1
Living with Non Relatives	--		1	0.0			1	0.2	--		--		1	0.1	4	0.4	7	0.1
Living with Parents	275	14.4	55	2.9	--		147	30.0	6	4.0	97	19.2	728	47.7	640	59.2	1948	24.0
Living with Relatives	42	2.2	13	0.7			11	2.2	9	6.0	3	0.6	4	0.3	18	1.6	100	1.2
Living Independently	6	0.3	35	1.9			8	1.6	2	1.3	3	0.6	--		4	0.4	58	0.7
Child Has Run Away	17	0.9	7	0.4	1	0.2	15	3.1	--		--		--		2	0.2	42	0.5
Unspecified	165	8.7	81	4.3	5	0.8	46	9.8	4	2.7	96	19.0	243	15.9	356	32.9	1000	12.3
TOTAL	1908	100.0	1872	100.0	591	100.0	490	100.0	150	100.0	506	100.0	1527	100.0	1081	100.0	8127	100.0

[a] Foster home includes free home placement.

CWA - Child Welfare Act
JDA - Juvenile Delinquency Act

TABLE 4 REGIONAL OFFICE DISTRIBUTION OF CHILD WELFARE CASELOAD, ALBERTA, JULY - SEPTEMBER, 1975

	Temporary Ward (CWA)		Permanent Ward (CWA)		Custody by Agreement		Out of Province Ward		Temporary Ward (JDA)		Probation		Handicapped Children's Services		View to Adoption		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Athabasca	36	43.9	34	41.4					3	3.7	1	1.2	5	6.1	3	3.7	82	100.0
Barrhead	35	27.1	52	40.3	9	7.0	2	1.5	4	3.1	8	6.2	13	10.1	6	4.7	129	100.0
Blairmore	34	33.7	17	16.8	16	15.8	2	2.0	3	3.0	12	11.9	13	12.9	4	3.9	101	100.0
Bonnyville	36	31.3	30	26.1	9	7.8	2	1.7	4	3.5	13	11.3	16	13.9	5	4.4	115	100.0
Brooks	13	23.7	5	9.1	2	3.6	7	12.7	5	9.1	12	21.8	9	16.4	2	3.6	55	100.0
Calgary North	191	22.3	159	18.6	48	5.6	15	1.8	36	4.2	74	8.7	266	31.1	66	7.7	855	100.0
Calgary South	239	28.6	138	16.5	54	6.5	20	2.4	28	3.3	24	2.9	177	21.2	155	18.6	835	100.0
Calgary South West	71	11.5	90	14.5	32	5.2	5	0.8	98	15.8	305	49.2	4	0.6	15	2.4	620	100.0
Camrose	9	15.5	17	29.3	3	5.2	1	1.7			3	5.2	15	25.9	10	17.2	58	100.0
Drumheller	17	23.6	23	31.9	3	4.2			2	2.8	5	6.9	19	26.4	3	4.2	72	100.0
Edmonton North	242	26.1	157	16.9	81	8.7	11	1.2	125	13.5	281	30.3	9	1.0	21	2.3	927	100.0
Edmonton South	107	30.8	124	35.7	45	13.0	7	2.0	2	0.6	8	2.3	4	1.2	50	14.4	347	100.0
Edmonton West	100	10.3	238	24.4	49	5.0	19	1.9	7	0.7	2	0.2	455	46.7	105	10.8	975	100.0
Edmonton West 10	58	33.9	60	35.1	8	4.7	3	1.7	7	4.1	1	0.6	26	15.2	8	4.7	171	100.0
Edson	8	11.6	20	29.0	5	7.2			1	1.5	10	14.5	21	30.4	4	5.8	69	100.0
Fort McMurray	26	26.5	22	22.5	14	14.3			11	11.2	10	10.2	10	10.2	5	5.1	98	100.0
Grande Cache	4	21.1							2	10.5	4	21.1	6	31.6	3	15.7	19	100.0
Grande Prairie	88	29.4	67	22.4	16	5.4	9	3.0	29	9.7	18	6.0	59	19.7	13	4.4	299	100.0
Hanna	7	17.9	9	23.1	1	2.6	2	5.1	1	2.6	5	12.8	8	20.5	6	15.4	39	100.0
High Level	15	45.4			3	9.1			2	6.1			11	33.3	2	6.1	33	100.0
High Prairie	49	26.1	45	24.0	2	1.0	2	1.0	32	17.0	33	17.6	22	11.7	3	1.6	188	100.0
Lac La Biche	33	35.1	36	38.3	1	1.1	2	2.1	3	3.2	11	11.7	7	7.4	1	1.1	94	100.0
Lethbridge	73	22.5	63	19.4	23	7.1	8	2.4	34	10.5	46	14.1	56	17.2	22	6.8	325	100.0
Medicine Hat	26	23.6	20	18.2	5	4.5	2	1.8	6	5.5	14	12.7	27	24.6	10	9.1	110	100.0
Olds	12	21.8	5	9.1	3	5.5	1	1.8	1	1.8	10	18.2	16	29.1	7	12.7	55	100.0
Peace River	20	19.4	20	19.4	2	1.9	1	1.0	2	1.9	16	15.6	34	33.0	8	7.8	103	100.0
Red Deer	53	18.7	84	29.7	19	6.7	4	1.4	7	2.5	45	15.9	62	21.9	9	3.2	283	100.0
Rocky Mountain House	57	40.2	31	21.8	3	2.1	4	2.8	4	2.8	29	20.4	14	9.9	--		142	100.0
Slave Lake	7	21.9	5	15.6	4	12.5	--		6	18.8	4	12.5	4	12.5	2	6.2	32	100.0
Smoky Lake	16	36.4	13	29.5	5	11.4	2	4.5	--		--		7	15.9	1	2.3	44	100.0
Stettler	8	15.7	7	13.7	8	15.7	2	3.9	--		12	23.5	14	27.5	--		51	100.0
St. Paul	65	47.1	43	31.2	4	2.9	--		--		3	2.2	22	15.9	1	0.7	138	100.0
Vegreville	21	23.4	29	32.2	6	6.7	3	3.3	2	2.2	9	10.0	17	18.9	3	3.3	90	100.0
Vermilion	14	13.5	45	43.3	8	7.7	1	1.0	6	5.7	6	5.7	21	20.2	3	2.9	104	100.0
Wainwright	10	11.1	46	51.2	2	2.3	4	4.4	4	4.4	10	11.1	10	11.1	4	4.4	90	100.0
Wetaskiwin	90	33.1	90	33.1	1	0.4	4	1.5	10	3.6	27	9.9	36	13.2	14	5.2	272	100.0
Whitecourt	17	26.2	14	21.5	12	18.5	2	3.1	2	3.1	4	6.1	11	16.9	3	4.6	65	100.0
City of Edmonton			1	33.3							2	66.7	--		--		3	100.0
City of Calgary	1	16.7							1	16.7	4	66.6	--		--		6	100.0
Central Office			13	41.9			3	9.7	--		--		1	3.2	14	45.2	31	100.0
TOTAL	1908	23.5	1872	23.0	506	6.2	150	1.9	490	6.0	1081	13.3	1527	18.8	591	7.3	8127	100.0

HIGHLIGHTS OF NOTIFIABLE DISEASES*

Barbara Juchli**

The following text and tables present the highlights of the reported notifiable disease cases for the three month period July-September, 1975, as they were reported to the divisions of Local Health Services and Social Hygiene. Table 1 shows the geographic distribution of the reported cases, Table 2 illustrates the age-sex distribution, and Tables 3 and 4 compare the number of cases and incidence rates of each disease with the previous five year corresponding quarter's mean number of cases and rates.

The five most frequently reported notifiable diseases during the July-September quarter were:

gonorrhoea (1828 cases)
streptococcal sore throat and scarlet fever (1320 cases)
rubella (German measles) (604 cases)
measles (475 cases)
infectious hepatitis (120 cases)

The caseload of reported gonorrhoea increased 15.7 per cent from the April-June quarter; male cases by 14.9 per cent and female cases by 17.3 per cent. The majority of cases were in the 15-19 year age group (23.5 per cent and in the 20-24 year age group (32.6 per cent). The number of male and female cases were higher than the five-year average by 11.1 per cent and 29.0 per cent respectively. A comparison of this quarter's incidence rates with the five-year rates shows males with 4.9 more cases per 100,000 and females with 11.9 more cases per 100,000.

The number of cases of streptococcal sore throat and scarlet fever decreased considerably from 2339 to 1320 cases (43.6 per cent). Sizeable decreases occurred in the city of Edmonton (323 to 185 cases); in the health units of Barons-Eureka (115 to 23 cases), Grande Prairie (145 to 0 cases), and Sturgeon (295 to 144 cases); and in the Northern Alberta Health Services area (134 to 41 cases). As usual the cases were evenly divided between males and females, and the 5-9 year age group had the largest percentage of cases (31.9 per cent). The number of cases in the July-September 1975 quarter was 2.6 times that of the previous five-year average number of cases, and the incidence rate was 2.4 times the five-year incidence figure.

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* Tuberculosis is not included in this article

** Barbara Juchli is a research assistant with Research and Planning

Reported cases of rubella decreased substantially from 2359 in the April-June quarter to 604 cases in this quarter. The city of Calgary experienced the largest decrease in rubella cases (843 cases or 71.6 per cent) while still maintaining the largest number of reported cases (335). The 5-9 year age group had the largest percentage of cases (41.4 per cent) and females had 10 per cent more cases than males. The average number of rubella cases and incidence rate for this quarter were approximately 3.5 times as great as the five-year corresponding figures. It appears that the rubella epidemic which started in late 1974 had subsided by this quarter.

Another disease which had a decline in reported cases was measles (1366 to 475 cases) with a 65.2 per cent decline. Calgary city had the largest decrease (959 to 253 cases). The 5-9 year age group had the highest caseload with 47.2 per cent; the total caseload was split evenly between males and females. The mean number of measles cases and incidence rate was about 1.5 times that of the previous five-year mean and rate. The measles epidemic, which closely paralleled rubella, was also subsiding.

There was a 35.5 per cent decrease in reported cases of infectious hepatitis; the city of Edmonton figures accounted for most of the drop (75 to 23 cases). There was no clustering of infectious hepatitis cases to specific age groups, as was noted for rubella and measles. Both the mean cases and incidence rate were less than half the corresponding five-year average mean and incidence rate.

TABLE 1 REPORTED CASES OF THE MORE FREQUENT NOTIFIABLE DISEASES (EXCLUDING VENEREAL DISEASES) BY CITY, HEALTH UNIT, OR OTHER JURISDICTION, ALBERTA, JULY - SEPTEMBER 1975

	Salmonellosis		Bacillary Dysentery	Diphtheria	Strept. Throat, Scarlet F.	Pertussis	Infectious Hepatitis	Serum Hepatitis	Measles	Rubella
	Food as vehicle	Food not mentioned								
Cities										
Edmonton	-	26	14	1	185	6	23	3	39	52
Calgary	1	28	6	1	15	22	61	4	253	335
Grande Prairie	-	-	2	-	-	1	-	-	-	4
Lethbridge	-	2	-	-	1	2	3	-	3	10
Medicine Hat	-	1	-	-	47	-	-	-	-	1
Red Deer	-	5	-	-	44	-	6	-	1	20
Health Units										
Alberta East Central	-	3	-	-	22	-	3	-	25	29
Athabasca	1	5	9	2	263	-	-	-	19	3
Banff National Park	-	-	-	-	-	-	-	-	2	1
Barons Eureka	-	4	4	-	23	3	-	-	4	11
Big Country	-	-	-	-	16	-	-	-	23	4
Chief Mountain	-	-	-	-	11	-	-	-	18	8
Chinook	-	-	-	-	15	-	1	-	1	3
County of Warner	-	1	-	-	7	1	-	-	4	-
Drumheller	-	-	-	-	5	-	1	-	-	1
Edson	5	3	-	1	88	-	-	-	-	4
Foothills	-	1	-	-	-	-	-	-	1	11
Grande Prairie	-	1	11	2	-	-	-	-	-	-
Jasper National Park	-	-	-	-	-	-	1	-	-	1
Leduc - Strathcona	-	1	-	-	53	-	2	-	8	9
Medicine Hat	-	2	2	-	11	-	-	-	1	3
Minburn - Vermilion	-	1	3	-	54	-	-	-	-	-
Mount View	-	-	-	-	9	4	1	-	28	53
North Eastern Alberta	-	2	1	1	15	-	-	1	8	-
Peace River	-	-	8	-	29	-	2	-	-	-
Red Deer	-	2	1	-	37	-	2	-	7	20
Stony Plain - Lac Ste. Anne	41	5	2	-	86	3	4	-	1	2
Sturgeon	-	1	-	-	144	1	-	-	2	11
Vegreville	-	-	-	-	34	-	-	-	7	4
Wetoka	2	-	-	-	13	-	-	-	2	1
Other Jurisdictions										
Canadian Forces	-	-	-	-	-	-	-	-	-	-
Indian Reservations	-	5	7	3	52	-	-	-	11	-
Northern Alberta Health Services	-	-	1	1	41	-	10	-	6	2
Other Municipalities	-	-	-	-	-	-	-	-	1	1
TOTAL	50	99	71	12	1320	43	120	8	475	604

TABLE 2 REPORTED CASES OF NOTIFIABLE DISEASES BY SEX AND AGE, ALBERTA, JULY-SEPTEMBER 1975

Disease	Under 1		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 59		60+		Age not known		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Intestinal Infections																								
Salmonellosis																								
(a) with food as vehicle	-	-	-	1	5	3	1	5	2	4	3	2	3	2	2	2	2	8	3	2	-	-	21	29
(b) without mention of food as vehicle	9	3	12	5	3	2	9	3	7	1	3	6	1	4	1	3	9	4	12	2	-	-	66	33
Bacillary dysentery	5	2	15	17	2	4	4	5	-	1	1	2	1	-	1	5	3	1	1	1	-	-	33	38
Other Bacterial Diseases																								
Diphtheria	1	1	3	2	1	1	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	-	5	7
Streptococcal sore throat and Scarlet fever	25	8	134	115	223	198	114	119	52	58	24	34	27	45	36	37	25	26	8	12	-	-	668	652
Pertussis (Whooping cough)	7	10	6	9	5	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	23
Other Virus Diseases																								
Infectious hepatitis	-	-	2	2	4	3	4	4	9	15	10	15	9	7	6	9	12	8	1	-	-	-	57	63
Serum hepatitis	-	-	-	-	-	-	-	-	-	3	3	-	1	-	-	-	-	1	-	-	-	-	4	4
Measles	11	11	45	36	107	117	60	64	6	8	-	1	1	2	1	3	-	-	2	-	-	-	233	242
Rubella (German measles)	14	16	40	59	121	129	65	42	13	19	8	19	5	20	6	23	-	5	-	-	-	-	272	332
Gonorrhoea																								
Genito-urinary	-	-	-	1	-	-	-	11	207	223	392	203	295	86	208	61	99	18	8	1	8	7	1217	611
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis																								
Congenital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2
Acquired																								
(a) Early symptomatic																								
- Primary	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	1	1	-	-	-	-	-	2	3
- Secondary	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	4	-
- Other and unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Latent	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	2	-	-	-	4	3
(c) Late	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 3 REPORTED CASES OF NOTIFIABLE DISEASES (EXCLUDING VENEREAL DISEASES, TUBERCULOSIS AND RARE DISEASES) AND INCIDENCE RATES, ALBERTA, JULY - SEPTEMBER 1975, WITH AVERAGES FOR CORRESPONDING QUARTER 1970 - 1974*

Disease	July - September 1975		Average for Third Quarter 1970 - 74	
	Cases	Incidence Rate per 100,000	Cases	Incidence Rate per 100,000
Intestinal Infections				
Salmonellosis	50	2.82	10.6	0.64
(a) with food as a vehicle	99	5.59	98.8	5.97
(b) without mention of food as vehicle	71	4.01	97.4	5.88
Bacillary dysentery				
Other Bacterial Diseases				
Diphtheria	12	0.68	11.4	0.69
Streptococcal sore throat and scarlet fever	1320	74.49	512.8	30.97
Pertussis (Whooping cough)	43	2.43	26.6	1.61
Other Virus Diseases				
Infectious hepatitis	120	6.77	267.6	16.16
Serum hepatitis	8	0.45	12.8	0.77
Measles	475	26.81	297.8	17.98
Rubella (German measles)	604	34.09	167.2	10.10

*Population figures for incidence rates are from Statistics Canada's quarterly estimates - catalogue 91-001, July 1975.

TABLE 4 REPORTED CASES OF VENEREAL DISEASES AND INCIDENCE RATES BY SEX, ALBERTA, JULY - SEPTEMBER 1975, WITH AVERAGES FOR CORRESPONDING QUARTER 1970-1974*

	July - September 1975				Average for Third Quarter 1970 - 74			
	Cases		Incidence Rate per 100,000		Cases		Incidence Rate per 100,000	
	Male	Female	Male	Female	Male	Female	Male	Female
Gonorrhoea	1217	611	135.37	69.99	1095.8	473.8	130.45	58.06
Genito-Urinary	-	-	-	-	-	-	-	-
Other								
Syphilis								
Congenital	-	2	-	0.23	0.4	0.6	0.05	0.07
Acquired								
(a) Early symptomatic	2	3	0.22	0.34	4.4	0.2	0.52	0.02
- Primary	4	-	0.44	-	2.2	0.6	0.26	0.07
- Secondary	-	-	-	-	0.2	0.2	0.02	0.02
- Other and unspecified	4	3	0.44	0.34	11.4	7.4	1.36	0.92
(b) Latent	-	-	-	-	-	0.4	-	0.04
(c) Late								

*Population figures for incidence rates are from Statistics Canada's quarterly estimates - catalogue 91-001, July, 1975. The 1971 Alberta sex ratio was used to calculate male/female populations.

GLOSSARY

Boarding Home - A foster home in which the foster parents receive monetary compensation from the department to cover boarding expenses, clothing, etc. for the ward.

Caseload - The number of households, or units, assisted; these units consisting of one or more persons. Caseload is often used to refer to the collective heads of these units. (See "household head").

Child Welfare Act (1970, as amended) - A provincial act under which the welfare of children in the province of Alberta is safeguarded.

Free Home - A foster home in which the foster parents have chosen to receive no monetary compensation from the department for the care of the ward.

Independent Placement - A situation where an older teenage ward is granted independent status by the director of child welfare to live on his own.

Juvenile Delinquency Act (1929, as amended) - A federal act which establishes guidelines as to who deliquents are, how they are to be handled, and which provides the authority for provincial governments to develop flexible program service.

Municipal Caseload - A municipality is responsible for assisting an employable person who is a resident of the municipality and:
(1) was a resident of the municipality during the twelve months immediately preceding his application, and
(2) did not, during any part of these twelve months, receive material aid from the province or any other municipality.
The municipality is reimbursed 90% by the province for expenditures incurred.

Non-Ward (now called "custody by agreement") - Is a child (under the age of 18) whose parents have entered into an agreement with the director of child welfare for the temporary care of the child; the parents retain guardianship rights. Situations which result in custody by agreement usually involve circumstances such as illness of the parents, or the child, which make care of the child beyond the parents' capabilities.

Permanent Ward - A child (under the age of 18) whose ties with his natural parents have been completely severed and whose sole custodian and guardian is the director of child welfare. Permanent wardship expires at age 18; but until that time, such children are adoptable.

Reasons for Assistance - The social allowance program is available to those persons who lack the resources or income sufficient to meet their needs and those of their dependents. Eligibility for assistance is defined within the following categories for each application; the social worker assigns a reason for assistance on the following rank order basis. Applicants are assigned to the first category of reason for assistance that applies to them, proceeding through the list of reasons in their specified order.

Age (Person 60 or over) - A person may be considered eligible for assistance under this reason if 60 years of age or older. Prior to November 1971, women between 55 and 60 years of age were also eligible for social allowance by reason of age alone.

Person with Dependent Children - This reason is applicable to the single parent family where the parent (of either sex) actually has custody of or is personally caring for dependent child.

Physical III Health / Disability - This reason is applicable to a person with a physical disability, impairment, or illness, regardless of expected duration, which prevents rendering services for wages sufficient to meet the person's needs and those of dependents.

Mental III Health - This reason is applicable to persons having an obvious mental illness or a medical certificate confirming such mental illness, regardless of the expected duration.

Mental Retardation - This reason is applicable to persons who are mentally retarded. A medical certificate or assessment is required if the disability is not readily recognizable.

Employables - This reason is applicable to persons who are unemployed and seeking employment or whose employability may be under assessment, as well as to persons employed full- or part-time with insufficient income. This reason also applies to persons temporarily unavailable for work because of schooling, pregnancy, or in jail for less than 90 days.

Unsuitable for Employment - This reason is applicable to cases which have been assessed as socially, psychologically, or otherwise unsuited for employment. Such cases would be transferred from other reasons for assistance after the assessment period.

Guardian Social Allowance - This is an extension of the social allowance program designed to assist persons acting as guardians and providing care to children placed in their homes by parents unable or unwilling to provide such care.

Recipients - In contrast to the term "caseload", this term refers to the unit heads plus their dependents. The number of recipients on assistance is approximately two or three times as great as the caseload.

Temporary Ward - Children (under the age of 18) who are in custody of the director of child welfare for a temporary period. At the end of this specified period, the temporary wardship is reviewed by the court, Three possible outcomes of this review are: